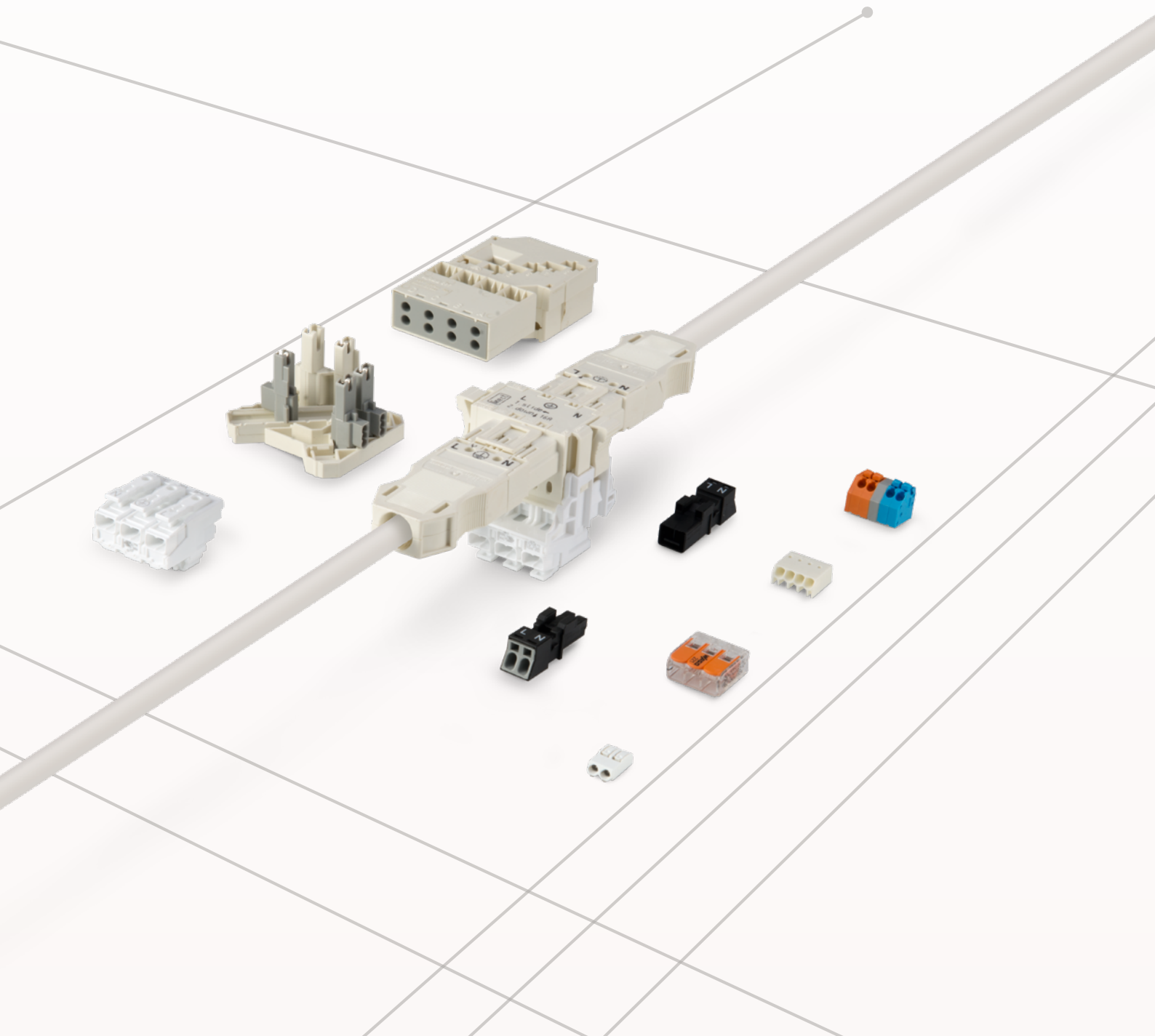


# WAGO Connection Technology for Lighting and Electrical Equipment

Edition 2020



# WAGO Full Line Catalogs



## Volume 1, WAGO Rail-Mount Terminal Block Systems

- Rail-Mount Terminal Blocks
- Rail-Mount Terminal Blocks with Pluggable Connector (X-COM®-SYSTEM)
- Patchboard Systems
- Terminal Strips
- PUSH WIRE® Connectors for Junction Boxes
- Lighting Connectors
- Shield Connecting System



## Volume 2, WAGO PCB Terminal Blocks and WAGO Connectors

- PCB Terminal Blocks
- THR/SMD PCB Terminal Blocks
- *MULTI CONNECTION SYSTEM (MCS)*
- Pluggable PCB Terminal Blocks
- Feedthrough Terminal Blocks
- Specialty Connectors
- Empty Housings



## Volume 3, Automation Technology

- Solutions & Software
- Operating & Monitoring
- Controllers
- Modular I/O-SYSTEM, IP20
- Industrial Switches
- Radio Technology
- IP67 Sensor/Actuator Boxes, IP67 Cables and Connectors



## Volume 4, WAGO Interface Electronic

- Relay and Optocoupler Modules
- Signal Conditioners and Isolation Amplifiers
- Current and Energy Measurement Technology
- Power Supplies
- Interface Modules and System Wiring
- Overvoltage Protection
- Empty Housings



## Volume 5, WAGO Pluggable Connection System WINSTA®

- Pluggable Connectors
- Snap-In Device Connectors
- Pluggable PCB Connectors
- Distribution Connectors
- Cable Assemblies
- Flat Cable Systems
- Distribution Boxes



## Volume 6, WAGO Marking

- Printer
- Software
- Terminal Block Marking
- Cable and Conductor Marking
- Device Marking
- Marker Carriers



## Connection Technology for Lighting and Electrical Equipment

		Page	
	SMD Terminal Blocks for LED Modules	8	1
	PCB Terminal Blocks for Drivers and Electronics	36	2
	<i>MCS – MULTI CONNECTION SYSTEM</i>	98	3
	Field-Wiring Terminal Blocks for Lighting	114	4
	Lighting Terminal Blocks and Connectors for Linect®	138	5
	Luminaire Connectors	180	6
	WINSTA® – The Pluggable Connection System	194	7
	Installation Connectors	232	8
	WAGO Lighting Management	254	9
	Accessories and Tools	258	10
	Technical Section	274	11
	Indexes and Addresses	324	12

# We Connect

## Connection Technology for LED Modules

### Why use WAGO?

- Flexible and modular applications
- Low profile and white housing minimize on-board shadowing
- Component high quality and durability

Our space-saving and modular connection systems can easily be implemented in already existing installations. Whether round, linear modules or retrofits, WAGO's connection solutions are easy to use while providing the quality you can rely on.



### Series



2059 Series



2060 Series



2061 Series



2065 Series



2070 Series



2075 Series

## Connection Technology for LED Drivers

### Why use WAGO?

- Wide product range for multiple applications
- Automated wiring solutions
- Compact solutions with custom color coding options

The perfect connection technology: A vast array of PCB terminal blocks for LED drivers offers you the best solution for various applications. Whether outdoor, compact or linear drivers – click here to find the ideal solution for your application.



### Series



250 Series



235 Series



805 Series



804 Series



744 Series



Serie 253 Series



Serie 735 Series



2604 Series

# Your Light



## Lighting Connection

### Why use WAGO?

- Easy and safe wiring of lights and appliances
- Compact, easy-to-use design, transparent housing, two test slots
- Electrical installations can be plugged in easily, safely and error-free with the **WINSTA®** Pluggable Connection System
- Circuits can be created quickly, expanded flexibly and adapted to new requirements

Regardless of whether the power connection is located inside or outside of the lamps, or whether the lighting systems are used for street lighting, homes, or in a hospital – you can rely on quality from WAGO for every application.

### Series



294 Series



Linect® 294 Series



272 Series



862 Series



WINSTA®



221 Series



2273 Series



773 Series



224 Series



243 Series



267 Series



873 Series



## Lighting Management

### Why use WAGO?

- Maximize every potential for savings! With proper lighting management, you can reduce your energy consumption for lighting by up to 70%.
- Applications: office buildings, production facilities, warehouses
- Fast lighting implementations via PFC200 Controller and DALI protocol
- Easy configuration and commissioning via standard Web browser
- Easy to operate and control

WAGO-I/O-SYSTEM with  
DALI Master Module

PFC200



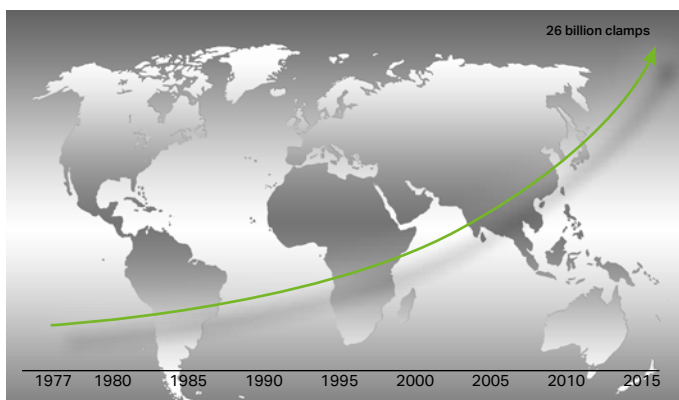
WINSTA®

## From Pioneer to Leader

When the first screwless terminal blocks debuted at the Hanover Fair in 1951, they represented a significant advancement in manufacturing. At the time, manufacturing terminal blocks was not possible because the carbon steel available then did not meet the high quality requirements.

Undeterred, WAGO was quite active in the years leading up to the 1977 debut of the first series of CAGE CLAMP®-equipped rail-mount terminal blocks from 0.08–16 mm<sup>2</sup> (28–6 AWG).

With numerous developments – from the Suprafix banana plug product family up to the first range of rail-mount terminal blocks for conductors up to 16 mm<sup>2</sup> (6 AWG) – WAGO has firmly established itself as an innovator.



Number of CAGE CLAMP® springs produced to date

With this reputation and the need for "vibration-proof, fast and maintenance-free" connections, CAGE CLAMP® quickly outperformed all previous connection technologies to become a worldwide industrial standard.

Today, CAGE CLAMP® technology has several imitators, yet it remains unmatched. And WAGO continues to set new standards with further developments, such as CAGE CLAMP® Compact (1996) for ultra-compact applications and the WAGO POWER CAGE CLAMP (1998) for a rated cross-section up to 185 mm<sup>2</sup> (350 kcmil). Figures speak for themselves: More than 26 billion CAGE CLAMP® springs have been sold worldwide, and every day, millions of clamps are added to that number.

In 1951, WAGO was founded in Minden, Germany. Now, the WAGO Group consists of 32 companies with more than 8,500 employees, worldwide operations and global sales of 932 million euros (2018).

The first factory was located in Minden, Germany, which is also our global headquarters. As part of WAGO's international expansion, additional factories have been built: 1977 in Domdidier (Switzerland), 1979 in Milwaukee (USA), 1995 in Sondershausen (Germany) and Delhi (India), as well as 1997 in Tianjin (China) and Wroclaw (Poland).

Products manufactured locally for domestic and foreign markets create the starting point for localized distribution networks that cover WAGO's complete product portfolio. Such organization enables WAGO subsidiaries and sales offices to develop and deliver custom-designed products that comply with local regulations and meet local demand. More than half of WAGO's global staff of 8,500 is employed outside of Germany.



# WAGO Worldwide



WAGO Minden, Germany – Global Headquarters



WAGO Sondershausen, Germany



WAGO Switzerland



WAGO Poland



WAGO India



WAGO USA



WAGO China



## Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions:

### PUSH-IN CAGE CLAMP®



Push-in CAGE CLAMP® terminates the following copper conductors: solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



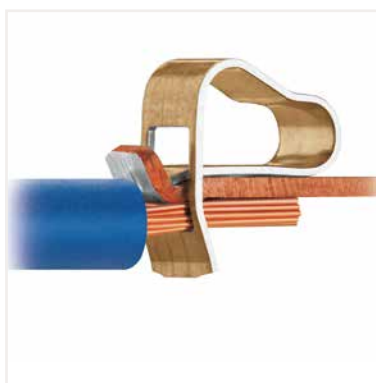
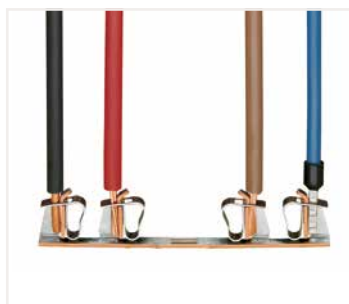
fine-stranded, with pin terminal (gastight crimped)

The universal connection with an additional advantage: Push-in connection  
Terminate solid and stranded, as well as ferruled conductors, by simply pushing them in – no tools required.

Termination for all conductor types:

- Open clamping unit
- Insert the conductor
- Release clamp – done!

### CAGE CLAMP®



CAGE CLAMP® terminates the following copper conductors: solid



stranded



fine-stranded, also with tinned single strands



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

The universal connection for solid, stranded and fine-stranded conductors

Termination:

- Open clamping unit
- Insert the conductor
- Release clamp – done!

## Operating WAGO Connection Technologies

Please follow the applicable product-specific termination instructions:

### POWER CAGE CLAMP®



POWER CAGE CLAMP terminates the following copper conductors: solid



stranded



fine-stranded, also with tinned single strands



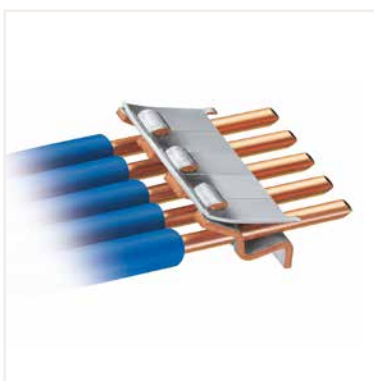
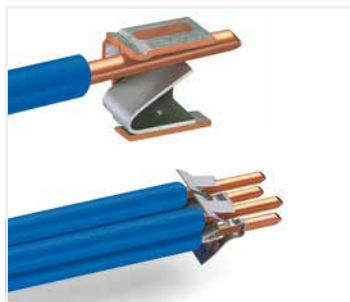
fine-stranded, with ferrule (gastight crimped)

The universal connection for conductors larger than 35 mm<sup>2</sup> (2 AWG)

Termination:

- Open clamp by turning a T-wrench counter-clockwise
- Press the integrated latch to open clamping unit for hands-free wiring
- Insert the conductor
- A short counter-clockwise rotation closes the clamp, securing the conductor

### PUSH WIRE®



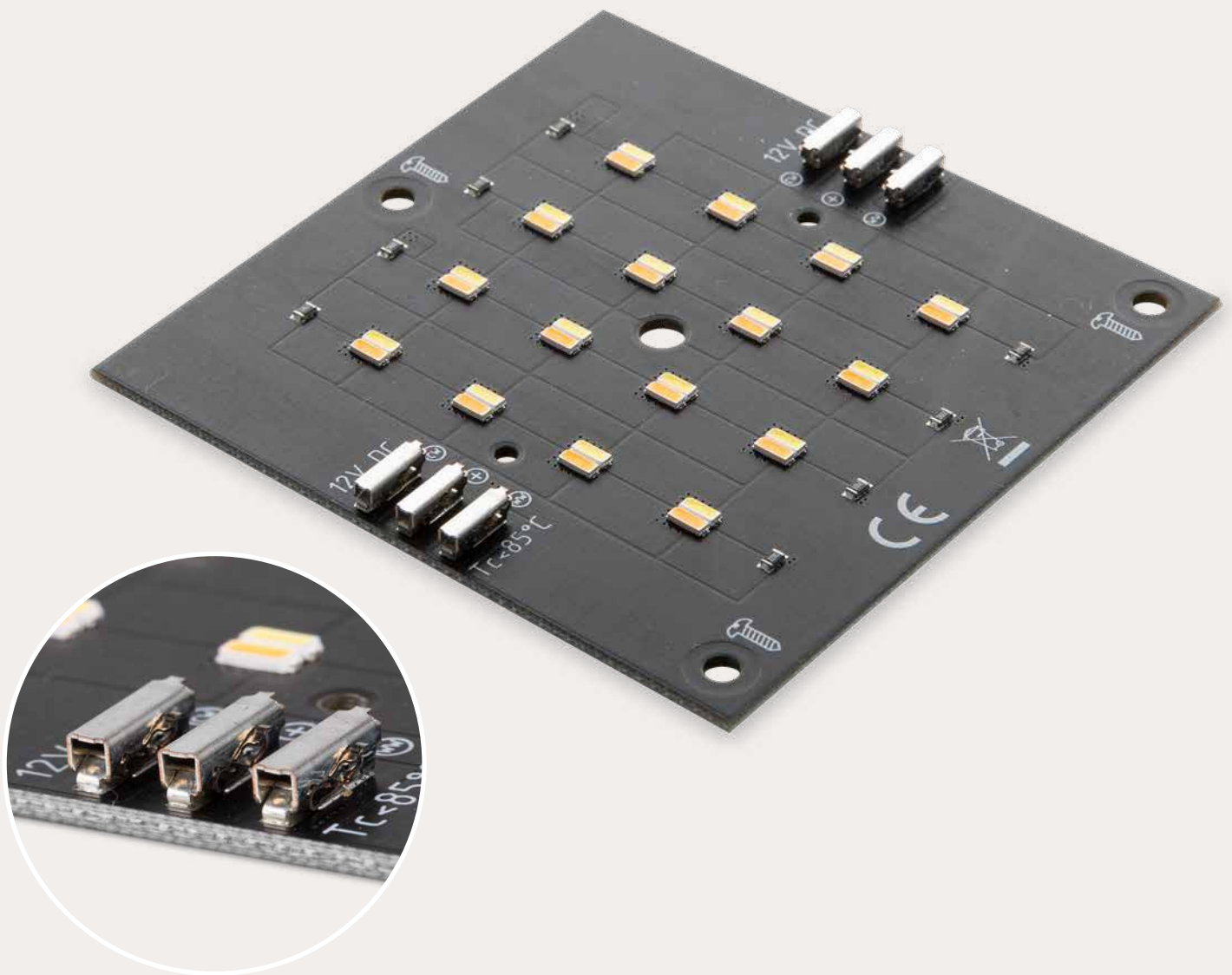
PUSH WIRE® terminates the following copper conductors: solid

PUSH WIRE® connection for solid and stranded conductors (depending on the model used)

Termination:






Tool-free, twist-free terminations for solid and rigid stranded conductors – simply push into unit





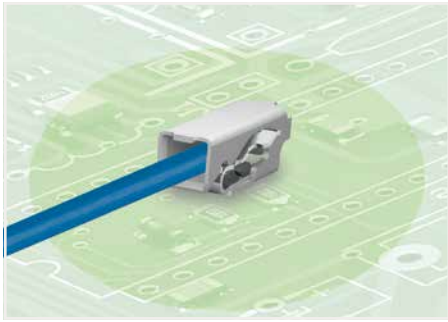
# WAGO SMD Terminal Blocks for LED Modules

WAGO SMD Terminal Blocks for LED Modules

			Page
	SMD PCB Terminal Blocks; without Housing	2065 Series	10
	SMD PCB Terminal Blocks	2059 Series	12
	SMD PCB Terminal Blocks with Push-Buttons	2060 Series 2061 Series	14
	Board-to-Board Links for SMD PCB Terminal Blocks	2059 Series 2060 Series 2061 Series 2065 Series	20
	Through-Board SMD PCB Terminal Blocks	2070 Series 2075 Series	28

## SMD PCB Terminal Block; without Housing; 0.75 mm<sup>2</sup> 2065 Series

1



- SMD PCB terminal block with Push-in CAGE CLAMP® and Push-Button
- Connect solid conductors via push-in termination
- Convenient termination/removal of fine-stranded conductors via push-button and operating tool
- Just 2.7 mm tall
- Available in tape-and-reel packaging for automated assembly
- Also available in a PUSH WIRE® variant without push-button (only for solid conductors)

Electrical Data	Push-in CAGE CLAMP®			PUSH WIRE®		
Pin spacing	6.5 mm / 0.256 inch			6 mm / 0.236 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	320 V	320 V	630 V	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Rated current	9 A	9 A	9 A	9 A	9 A	9 A
Approvals per	UL 1977			UL 1977		
Rated voltage	600 V			600 V		
Rated current	9 A			9 A		

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	7.5 ... 9.5 mm / 0.3 ... 0.37 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Connection technology	PUSH WIRE®
Strip length	7.5 ... 9.5 mm / 0.3 ... 0.37 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG

Material Data	
Limit temperature range	-60 ... +120 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	Tin-plated

**NOTE:** Terminal block without insulation housing!  
Protection against accidental contact must be provided  
at voltages higher than low voltages (e.g., SELV/PELV)  
for the relevant application.

The layout must meet the requirements of the insulation  
coordination standard EN/IEC 60664-1 and applicable end  
product standards.

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

## SMD PCB Terminal Block; without Housing; 0.75 mm<sup>2</sup> 2065 Series

With push-button; Push-in CAGE CLAMP® connection;  
Reel diameter: 330 mm; Pin spacing: 6.5 mm



Without push-button; PUSH WIRE® connection; Reel  
diameter 330 mm; Pin spacing: 6 mm



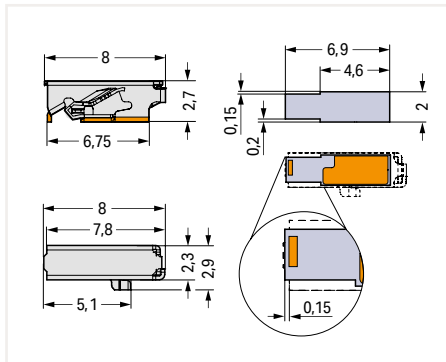
Operating tool for 2065-100



1

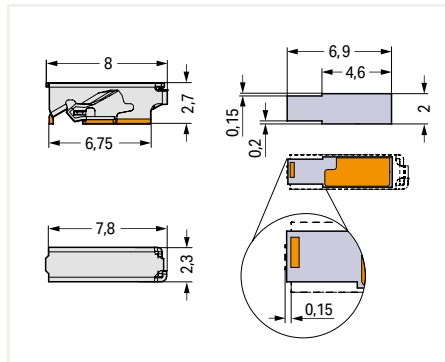
Pole No.	Item No.	Pack. Unit
1	2065-100/998-403	31800 (2650)

Dimensions (in mm):



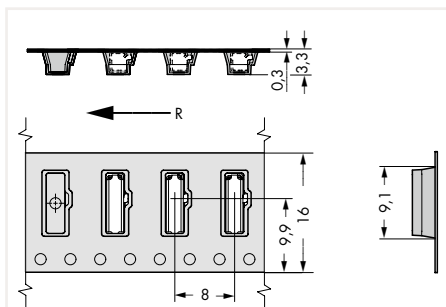
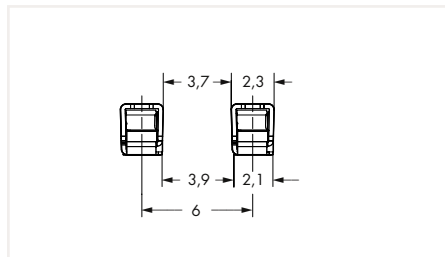
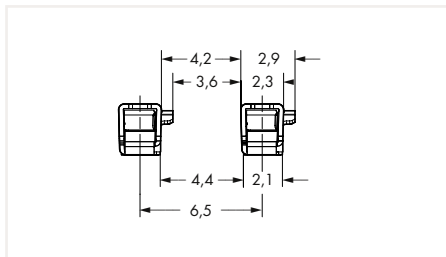
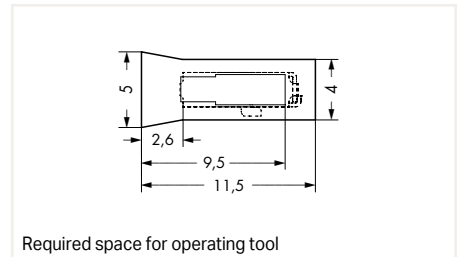
Pole No.	Item No.	Pack. Unit
1	2065-101/998-403	31800 (2650)

Dimensions (in mm):

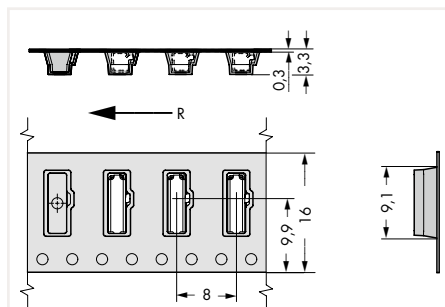


Item No.	Pack. Unit
2065-189	600 (50)

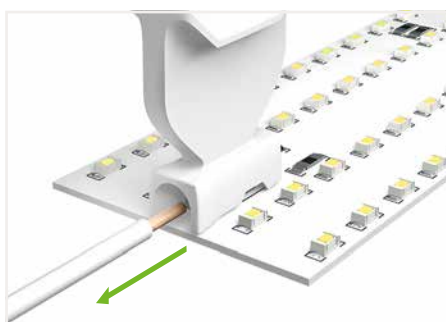
Dimensions (in mm):



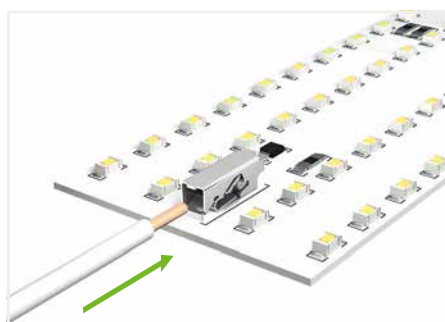
R = Feed direction



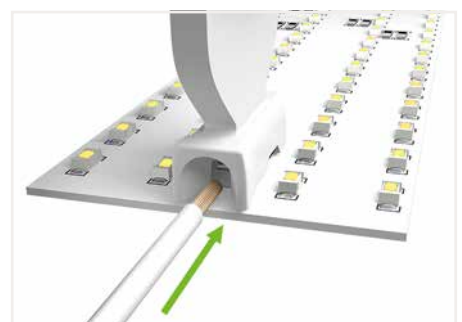
R = Feed direction



Push-in CAGE CLAMP® variant:  
Insert fine-stranded conductors and remove all conductor  
types via operating tool. Solid conductors can also be  
terminated by simply pushing them in.



PUSH WIRE® variant without push-button:  
Even more space savings when using exclusively solid  
conductors



The 2065-189 Operating Tool's funneled conductor entry  
securely guides all conductor types into the Push-in CAGE  
CLAMP®.

# SMD PCB Terminal Block; 0.5 mm<sup>2</sup>

Pin Spacing: 3 mm

2059 Series

1



- SMD PCB terminal blocks with PUSH WIRE® connection technology
- Push-in termination of solid conductors\*
- Easy conductor removal via operating tool
- Just 2.7 mm tall
- Assemble terminal blocks without pole loss
- Available in tape-and-reel packaging for automated assembly

Electrical Data	1-pole			2-/3-pole		
Pin spacing	3 mm / 0.118 inch			3 mm / 0.118 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	63 V	160 V	320 V	63 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Rated current	3 A	3 A	3 A	3 A	3 A	3 A
Approvals per	UL 1977			UL 1977		
Rated voltage	600 V			250 V		
Rated current	3 A			3 A		

Connection Data	
Connection technology	PUSH WIRE®
Strip length	4 ... 5.5 mm / 0.16 ... 0.22 inch
Conductor entry angle to the PCB	0°
Solid conductor	0.14 ... 0.34 mm <sup>2</sup> / 26 ... 22 AWG
Note (conductor cross-section)	For conductors that are not rigid enough, the clamping unit must be opened using an operating tool. No reconnection of smaller conductor cross-sections (0.5 mm <sup>2</sup> / 20 AWG)
Strip length (2)	6 ... 7.5 mm / 0.24 ... 0.3 inch
Solid conductor (2)	0.5 mm <sup>2</sup> / 20 AWG
Note (conductor cross-section) (2)	No reconnection of smaller conductor cross-sections (0.5 mm <sup>2</sup> / 20 AWG)

Material Data	
Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

## Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

## Note (conductor cross-sections):

- No reconnection of smaller conductor cross-sections (0.5 mm<sup>2</sup>/20 AWG)
- For conductors that are not rigid enough, the clamping unit must be opened using an operating tool.

## Recommendation for SMD stencil:

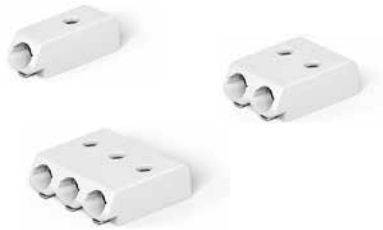
150 µm material thickness; pattern layout identical to solder pad layout

SMD PCB Terminal Block; 0.5 mm<sup>2</sup>; in Tape-and-Reel Packaging

Pin Spacing: 3 mm

2059 Series

White\*; Reel diameter: 330 mm



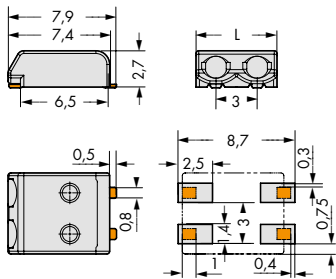
Black; Reel diameter: 330 mm



Pole No.	Item No.	Pack. Unit
1	2059-301/998-403	31800 (2650)
2	2059-302/998-403	21000 (1750)
3	2059-303/998-403	21000 (1750)

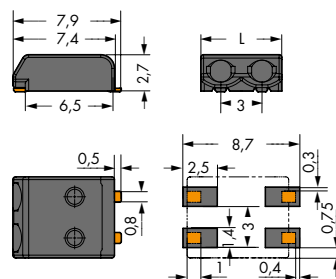
\*Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.

Dimensions (in mm):



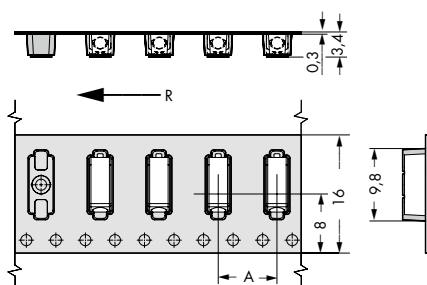
L = (pole no. x pin spacing) - 0.1 mm

Dimensions (in mm):



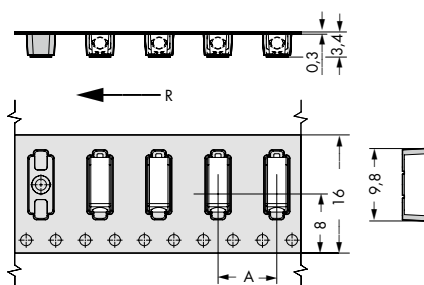
L = (pole no. x pin spacing) - 0.1 mm

Dimensions (in mm):



R = Feed direction  
A = 8 mm (1-pole)  
A = 12 mm (2- and 3-pole)

Dimensions (in mm):



R = Feed direction  
A = 8 mm (1-pole)  
A = 12 mm (2- and 3-pole)



Push-in termination of solid conductors



Easy conductor removal (e.g., via 206-859 Operating Tool)



Available in tape-and-reel packaging for automated assembly

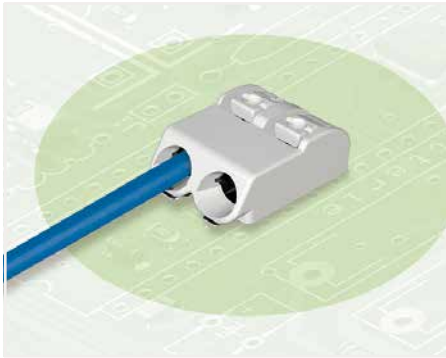
1

# SMD PCB Terminal Block with Push-Buttons; 0.75 mm<sup>2</sup>

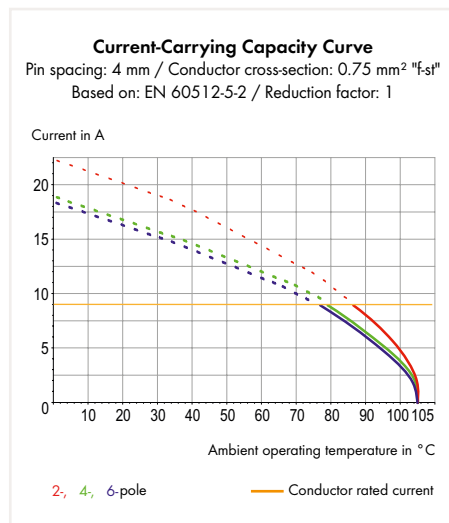
Pin Spacing: 4 mm

2060 Series

1



- SMD PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Just 4.5 mm tall
- Available in tape-and-reel packaging for automated assembly



Electrical Data	1-pole			2-/3-pole		
Pin spacing	4 mm / 0.157 inch			4 mm / 0.157 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	63 V	160 V	320 V	63 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Rated current	9 A	9 A	9 A	9 A	9 A	9 A
Approvals per	UL 1977			UL 1977		
Rated voltage	600 V			320 V		
Rated current	9 A			9 A		

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	7 ... 9 mm / 0.28 ... 0.35 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.34 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.34 mm <sup>2</sup>

Material Data	
Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

## Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

## Recommendation for SMD stencil:

150 µm material thickness; pattern layout identical to solder pad layout

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2



## SMD PCB Terminal Block with Push-Buttons; in Tape-and-Reel Packaging;

0.75 mm<sup>2</sup>; Pin Spacing: 4 mm

2060 Series

White\*; Reel diameter: 330 mm



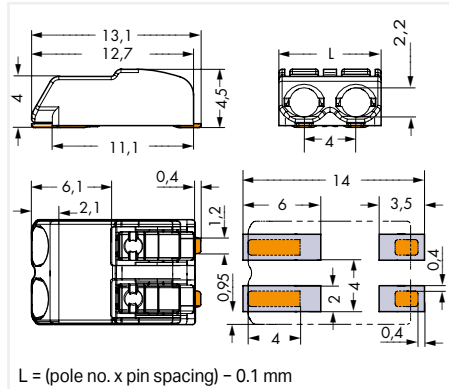
Black; Reel diameter: 330 mm



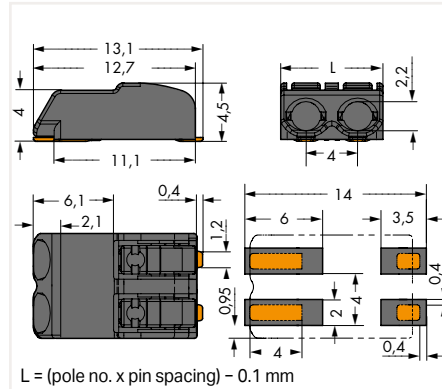
Pole No.	Item No.	Pack. Unit
1	2060-451/998-404	13500 (1500)
2	2060-452/998-404	9000 (1000)
3	2060-453/998-404	6750 (750)

\*Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.

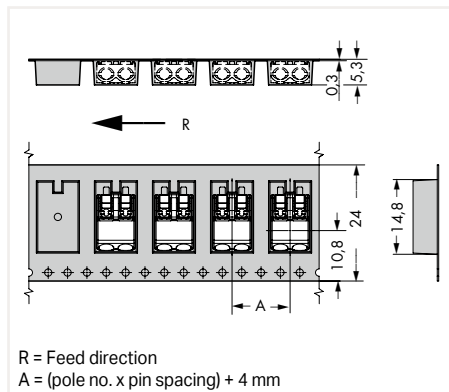
Dimensions (in mm):



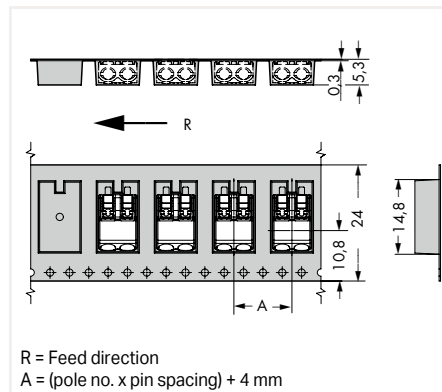
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



Push-in termination of solid conductors



Inserting/removing fine-stranded conductors by lightly pressing on a push-button (e.g., via 206-860 Operating Tool).



Terminal blocks can be arranged side-by-side without loss of poles.



Available in tape-and-reel packaging for automated assembly

# SMD PCB Terminal Block with Push-Buttons; 0.75 mm<sup>2</sup>

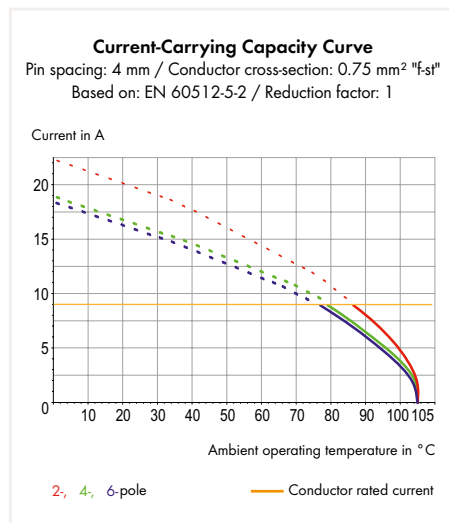
Pin Spacing: 8 mm

2060 Series

1



- SMD PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- 8 mm pin spacing version for higher-rated voltages
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Height of just 4.5 mm minimizes on-board LED shadowing
- Available in tape-and-reel packaging for automated assembly



Electrical Data				
Pin spacing	8 mm / 0.314 inch			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	400 V	630 V	1000 V	
Rated surge voltage	6 kV	6 kV	6 kV	
Rated current	9 A	9 A	9 A	
Approvals per	UL 1977			
Rated voltage	600 V			
Rated current	9 A			

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	7 ... 9 mm / 0.28 ... 0.35 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.34 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.34 mm <sup>2</sup>

Material Data	
Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

## Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

## Recommendation for SMD stencil:

150 µm material thickness; pattern layout identical to solder pad layout

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

# SMD PCB Terminal Block with Push-Buttons; in Tape-and-Reel Packaging; 0.75 mm<sup>2</sup>; Pin Spacing: 8 mm 2060 Series

**PUSH-IN CAGE CLAMP®**

White\*; Reel diameter: 330 mm



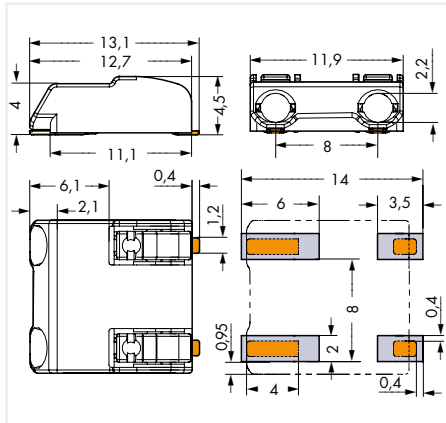
Black; Reel diameter: 330 mm



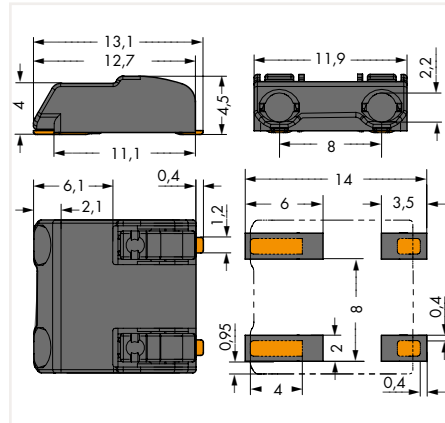
Pole No.	Item No.	Pack. Unit
2	2060-852/998-404	6750 (750)

\*Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.

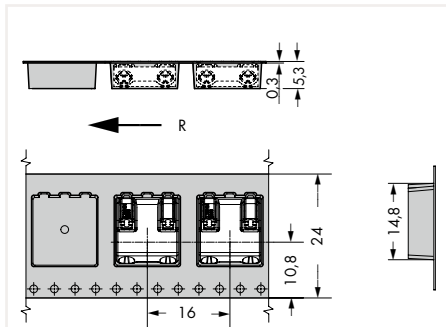
Dimensions (in mm):



Dimensions (in mm):

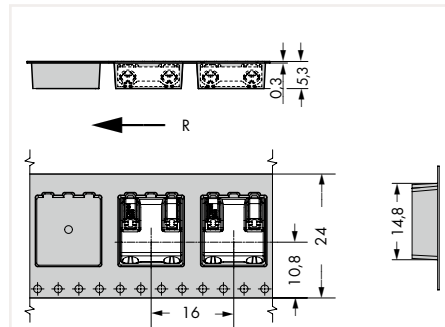


Dimensions (in mm):



R = Feed direction

Dimensions (in mm):



R = Feed direction

1



Inserting solid conductors via push-in termination (picture shows 2060 Series).



Inserting/removing fine-stranded conductors by lightly pressing on a push-button (e.g., via 206-860 Operating Tool).



Available in tape-and-reel packaging for automated assembly

# SMD PCB Terminal Block with Push-Buttons; 1.5 mm<sup>2</sup>

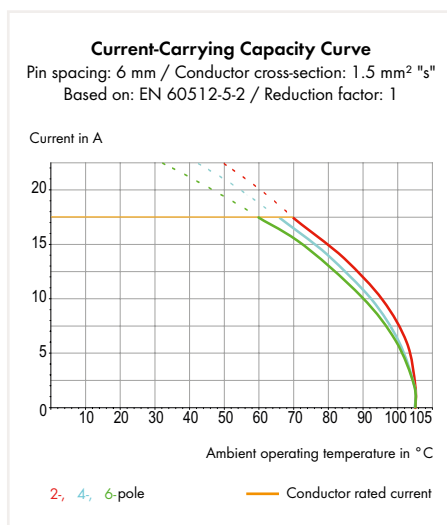
Pin Spacing: 6 mm

2061 Series

1



- SMD PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- Just 5.6 mm tall
- Push-in termination of solid and ferruled conductors
- Push-button for easy connection and disconnection of all conductor types
- Available in tape-and-reel packaging for automated assembly



Electrical Data	1-pole			2-/3-pole		
Pin spacing	6 mm / 0.157 inch			6 mm / 0.157 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	250 V	320 V	630 V	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Rated current	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A
Approvals per	UL 1977			UL 1977		
Use group	B	D		B	D	
Rated voltage	600 V	600 V		300 V	300 V	
Rated current	10 A	5 A		10 A	10 A	

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	7 ... 10 mm / 0.28 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.5 ... 0.75 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 0.75 mm <sup>2</sup>

Material Data	
Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

## Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

## Recommendation for SMD stencil:

150 µm material thickness; pattern layout identical to solder pad layout

\*(III / 2) ≙ Overvoltage category III / Pollution degree 2

## SMD PCB Terminal Block with Push-Buttons; in Tape-and-Reel Packaging;

1.5 mm<sup>2</sup>; Pin Spacing: 6 mm

2061 Series

White\*; Reel diameter: 330 mm



Black; Reel diameter: 330 mm



Push-in termination of solid conductors

Pole No.	Item No.	Pack. Unit
1	2061-601/998-404	8100 (900)
2	2061-602/998-404	6300 (700)
3	2061-603/998-404	4050 (450)

\*Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.

Pole No.	Item No.	Pack. Unit
1	2061-621/998-404	8100 (900)
2	2061-622/998-404	6300 (700)
3	2061-623/998-404	4050 (450)

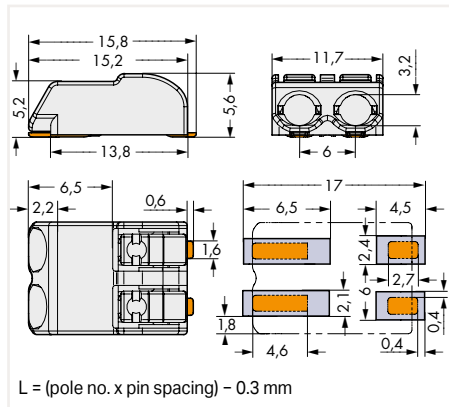


Inserting/removing fine-stranded conductors by lightly pressing on a push-button (e.g., via 206-861 Operating Tool).

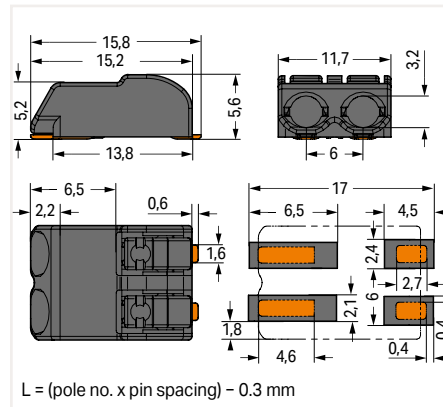


Available in tape-and-reel packaging for automated assembly

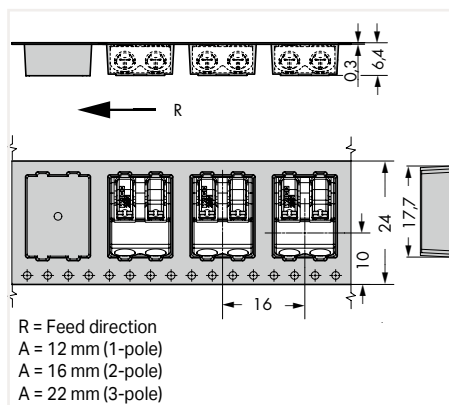
Dimensions (in mm):



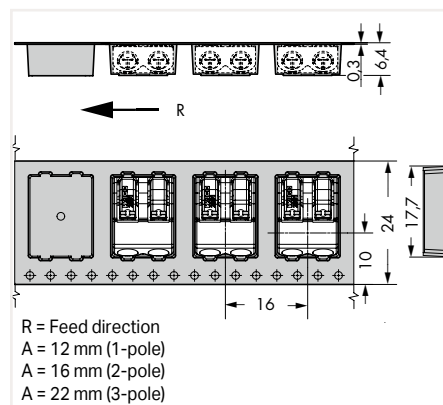
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



## Board-to-Board Link for SMD PCB Terminal Blocks ; 0.5 mm<sup>2</sup>;

Pin Spacing: 3 mm

2059 Series

1



- Board-to-board links simplify LED module assembly
- Easy push-in connection and disconnection

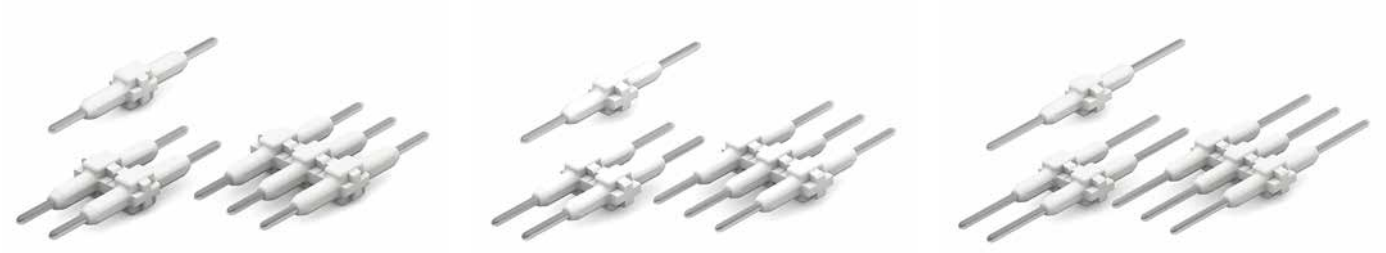
Electrical Data				
Pin spacing	3 mm / 0.118 inch			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	63 V	160 V	320 V	
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	
Rated current	3 A	3 A	3 A	

Material Data	
Material group	I
Insulating material	Polyamide (PA 66)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Silver-plated

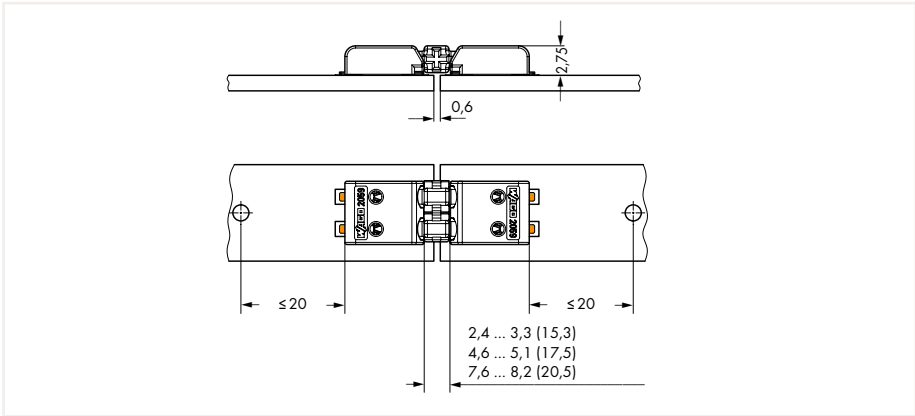
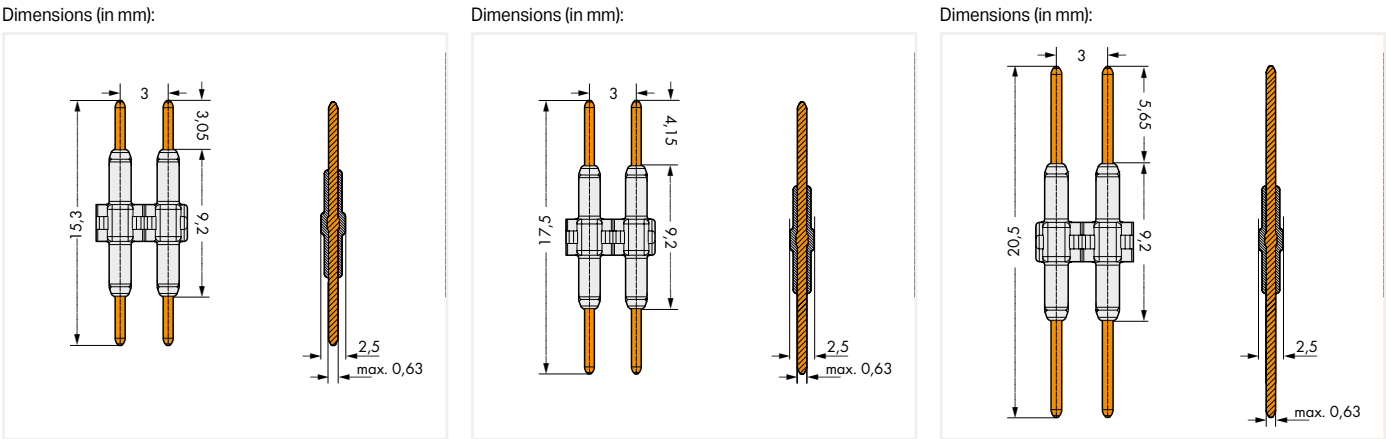
\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

Board-to-Board Link for SMD PCB Terminal Blocks ; 0.5 mm²;  
Pin Spacing: 3 mm  
2059 Series

- Pin length: 15.3 mm
- Pin length: 17.5 mm
- Pin length: 20.5 mm



Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
1	2059-901	1500	1	2059-901/018-000	1500	1	2059-901/021-000	1500
2	2059-902	500	2	2059-902/018-000	500	2	2059-902/021-000	500
3	2059-903	375	3	2059-903/018-000	375	3	2059-903/021-000	375
4	2059-904	250	4	2059-904/018-000	250	4	2059-904/021-000	250



Inserting a board-to-board link into the terminal block.

Assembly: Place PCBs on a flat surface and connect terminal blocks on adjoining PCBs via board-to-board link. Disassembly: Pull PCBs apart (max. 10 mating cycles).

The PCBs must be secured.



# Board-to-Board Link for SMD PCB Terminal Blocks with Push-Buttons; 0.75 mm<sup>2</sup>;

## Pin Spacing: 4 mm, 8 mm

### 2060 Series

1



- Board-to-board links simplify in-line assembly of LED modules
- Easy push-in connection and disconnection without push-button actuation

Electrical Data							
Pin spacing	4 mm / 0.157 inch			8 mm / 0.314 inch			
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1			
Overvoltage category	III	III	II	III	III	II	
Pollution degree	3	2	2	3	2	2	
Rated voltage	63 V	160 V	320 V	400 V	630 V	1000 V	
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	6 kV	6 kV	6 kV	
Rated current	9 A	9 A	9 A	9 A	9 A	9 A	
Approvals per	UL 1977			UL 1977			
Rated voltage	250 V			600 V			
Rated current	9 A			9 A			

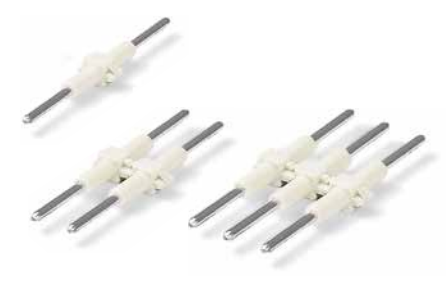
Material Data	
Material group	I
Insulating material	Polyamide (PA 66)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Silver-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

Board-to-Board Link for SMD PCB Terminal Blocks with Push-Buttons; 0.75 mm<sup>2</sup>;  
Pin Spacing: 4 mm, 8 mm  
2060 Series

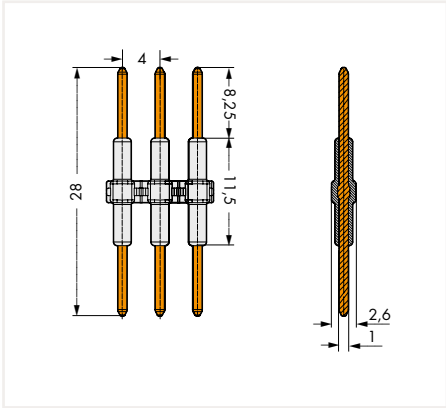
Pin spacing: 4 mm/0.157 inch; Pin length: 28 mm; White

Pin spacing: 8 mm/0.314 inch; Pin length: 28 mm; White

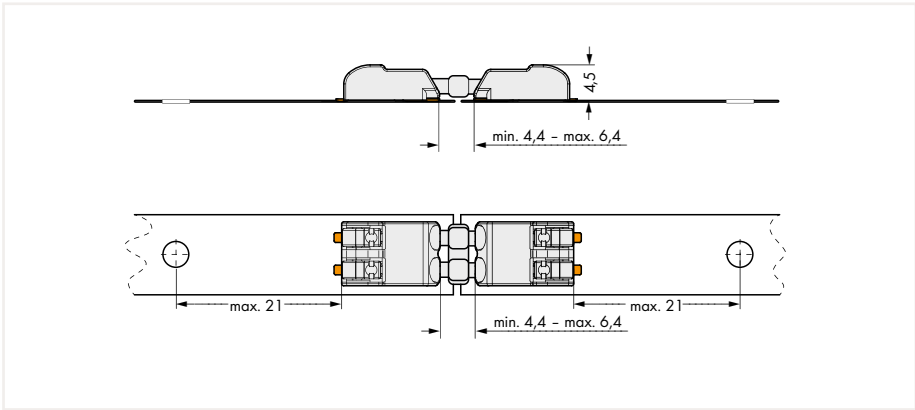
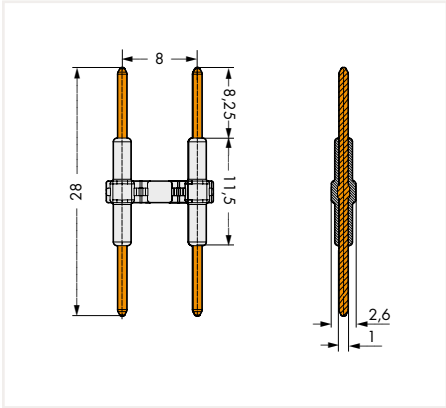


Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
1	2060-951/028-000	1500	2	2060-962/028-000	375
2	2060-952/028-000	500			
3	2060-953/028-000	375			
4	2060-954/028-000	250			

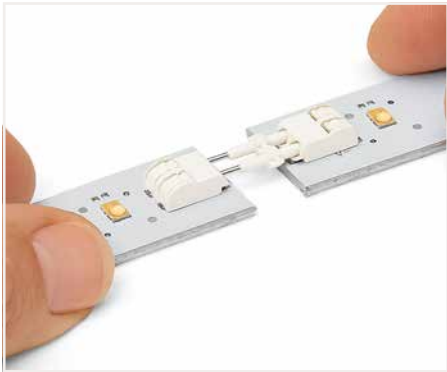
Dimensions (in mm):



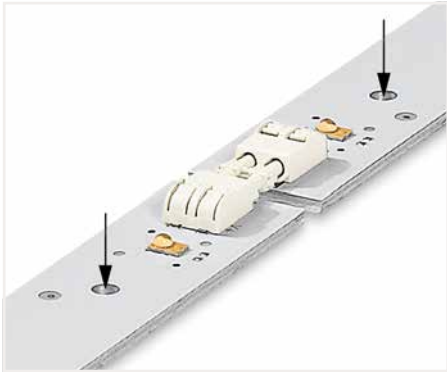
Dimensions (in mm):



Inserting a board-to-board link into the terminal block.



Assembly: Place PCBs on a flat surface and connect terminal blocks on adjoining PCBs via board-to-board link.  
Disassembly: Pull PCBs apart (max. 10 mating cycles).



The PCBs must be secured.

# Board-to-Board Link for SMD PCB Terminal Blocks with Push-Buttons; 1.5 mm<sup>2</sup>; Pin Spacing: 6 mm 2061 Series

1



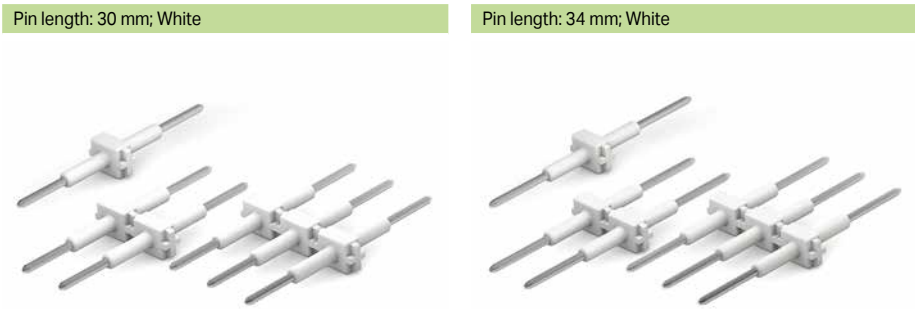
- Board-to-board link simplifies LED module assembly
- Easy push-in connection and disconnection without push-button actuation

Electrical Data				
Pin spacing	6 mm / 0.236 inch			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	250 V	320 V	630 V	
Rated surge voltage	4 kV	4 kV	4 kV	
Rated current	9 A	9 A	9 A	

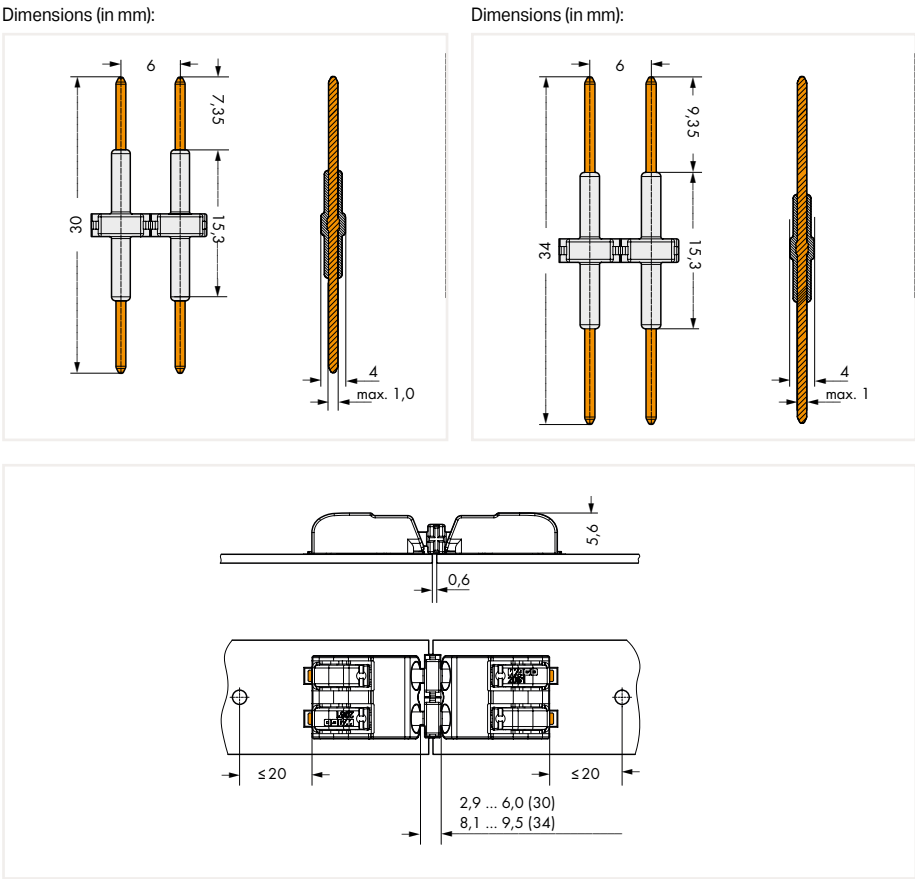
Material Data	
Material group	I
Insulating material	Polyamide (PA 66)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Silver-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

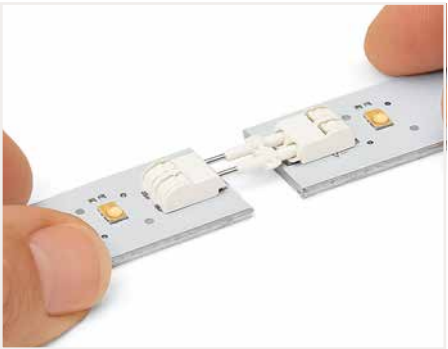
Board-to-Board Link for SMD PCB Terminal Blocks with Push-Buttons; 1.5 mm<sup>2</sup>;  
Pin Spacing: 6 mm  
2061 Series



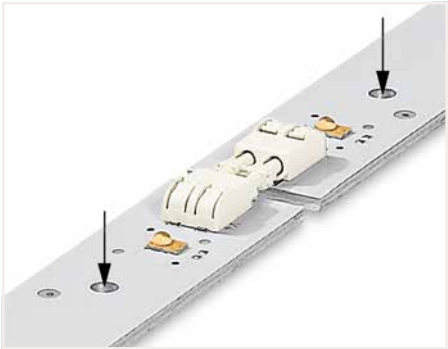
Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
1	2061-901	700	1	2061-901/034-000	700
2	2061-902	300	2	2061-902/034-000	300
3	2061-903	200	3	2061-903/034-000	200
4	2061-904	100	4	2061-904/034-000	100



Inserting a board-to-board link into the terminal block.



Assembly: Place PCBs on a flat surface and connect terminal blocks on adjoining PCBs via board-to-board link.  
Disassembly: Pull PCBs apart (max. 10 mating cycles).



The PCBs must be secured.

## Board-to-Board Link for SMD PCB Terminal Blocks 2065 Series

1



- Board-to-board links simplify LED module assembly
- Space-saving connection of PCBs

### Electrical Data

Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated Current	9 A	9 A	9 A

### Material Data

Contact material	Copper alloy
Contact Plating	Silver-plated

### Environmental Requirements

Limit temperature range	-60 ... +120 °C
-------------------------	-----------------

The layout must meet the requirements of the insulation coordination standard EN/IEC 60664-1 and applicable end product standards.

**NOTE: Terminal block without insulation housing! Protection against accidental contact must be provided at voltages higher than low voltages(e.g., SELV/PELV) for the relevant application.**

# Board-to-Board Link for SMD PCB Terminal Blocks

## 2065 Series

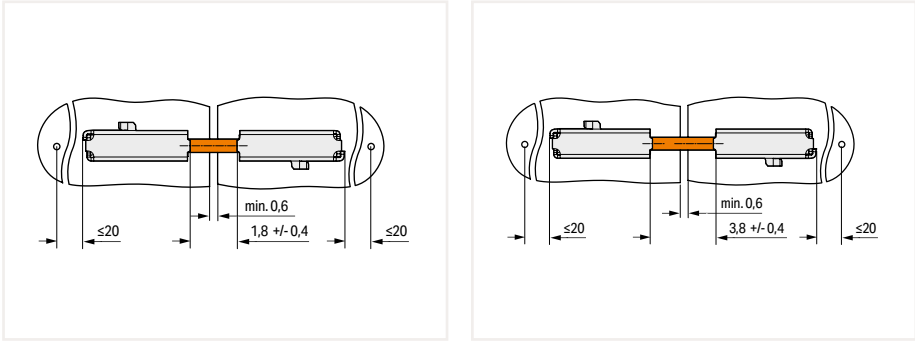
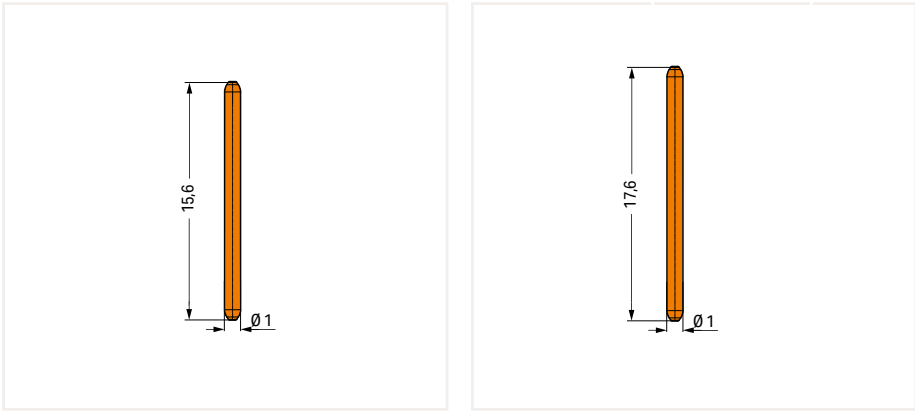
Pin length: 15.6 mm

Pin length: 17.6 mm



	Item No.	PU
	2065-131	1500

	Item No.	PU
	2065-133	1500



Inserting board-to-board links into the terminal blocks.

Assembly: Place PCBs on a flat surface and connect terminal blocks on adjoining PCBs via board-to-board link. Disassembly: Support disconnection by opening the terminals with operating tool (max. 5 mating cycles).

The PCBs must be secured.

# Through-Board SMD PCB Terminal Block; 0.75 mm<sup>2</sup>

Pin Spacing: 6.5 mm

2070 Series

1



- SMD PCB terminal block with Push-in CAGE CLAMP® connection for back-side wiring of LED modules
- Low profile of just 1.1 mm on the module's front side
- Connect solid conductors via push-in termination
- Insert fine-stranded conductors and remove all conductors via operating tool

Electrical Data	FR4 PCB Type			Metal-Core PCBs		
Pin spacing	6.5 mm / 0.256 inch			6.5 mm / 0.256 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	320 V	320 V	630 V	200 V	320 V	500 V
Rated surge voltage	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Rated current	9 A	9 A	9 A	9 A	9 A	9 A
Approvals per	UL 1977			UL 1977		
Rated voltage	600 V			600 V		
Rated current	9 A			9 A		

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	8 ... 10 mm / 0.31 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG

Material Data	
Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

Clearance and creepage distances  $\geq 3.0$  mm:  
500 V in applications per EN 60598-1

\*(III / 2)  $\triangleq$  Overvoltage category III /  
Pollution degree 2



# Through-Board SMD PCB Terminal Block with Cover; in Tape-and-Reel Packaging; 0.75 mm²; Pin Spacing: 6.5 mm 2070 Series

Reel diameter: 330 mm



Reel diameter: 330 mm



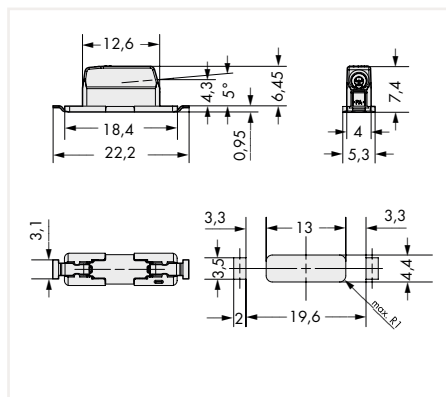
Reel diameter: 330 mm



1

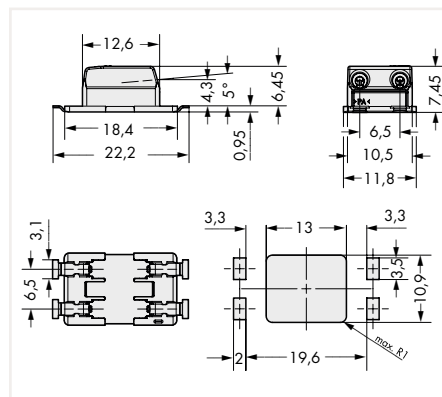
Pole No.	Item No.	Pack. Unit
1	2070-461/998-406	4770 (954)

Dimensions (in mm):



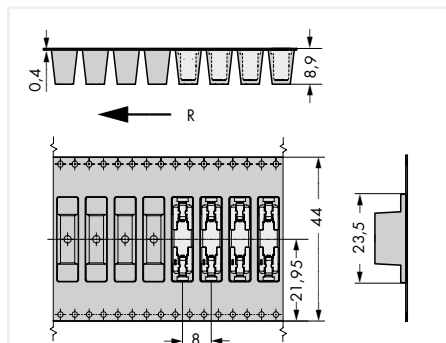
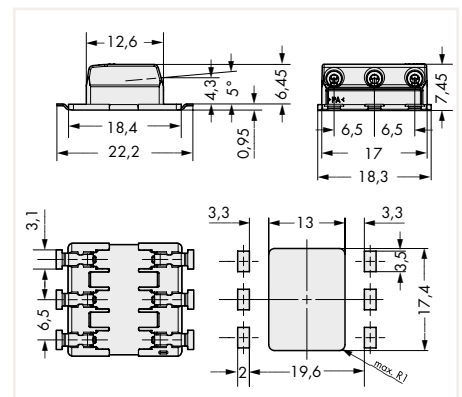
Pole No.	Item No.	Pack. Unit
2	2070-462/998-406	2385 (477)

Dimensions (in mm):

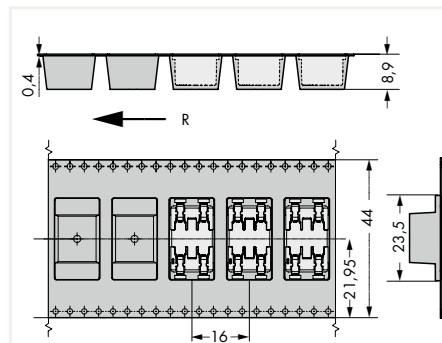


Pole No.	Item No.	Pack. Unit
3	2070-463/998-406	1590 (318)

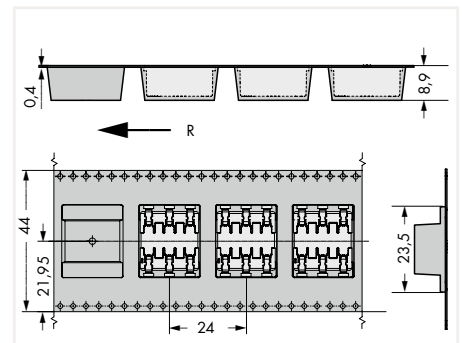
Dimensions (in mm):



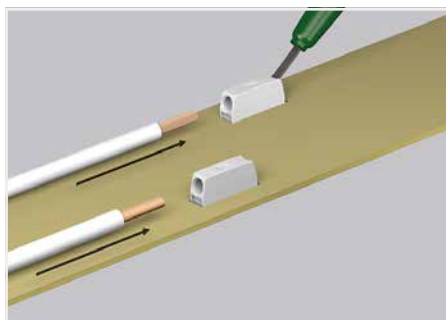
R = Feed direction



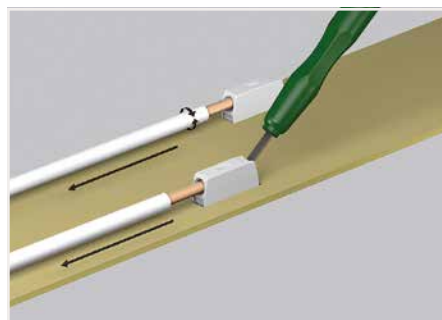
R = Feed direction



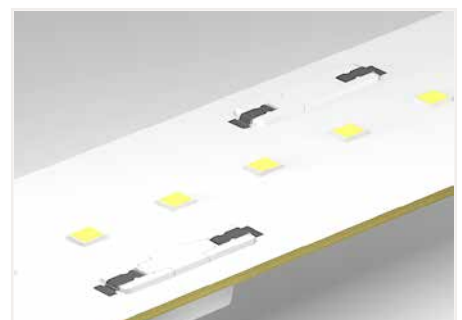
R = Feed direction



Insert fine-stranded conductors and remove all conductor types via operating tool. Solid conductors can also be terminated by simply pushing them in.



Use an operating tool or simply "twist and pull" to remove solid conductors.



The variants with cover feature a center contact surface for easy pick-and-place assembly and minimum shadowing.

Other variants can be requested via the WAGO sales department or, if necessary, configured at <https://configurator.wago.com/>:

- Reel diameter of tape-and-reel packaging 381 mm

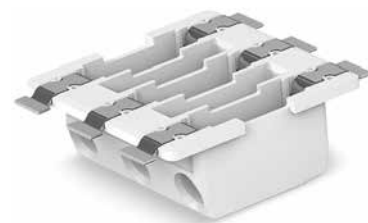
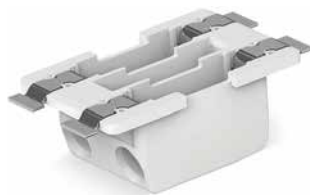
**PUSH-IN CAGE CLAMP®**

# Through-Board SMD PCB Terminal Block without Cover; in Tape-and-Reel Packaging; 0.75 mm<sup>2</sup>; Pin Spacing: 6.5 mm 2070 Series

Reel diameter: 330 mm

Reel diameter: 330 mm

Reel diameter: 330 mm

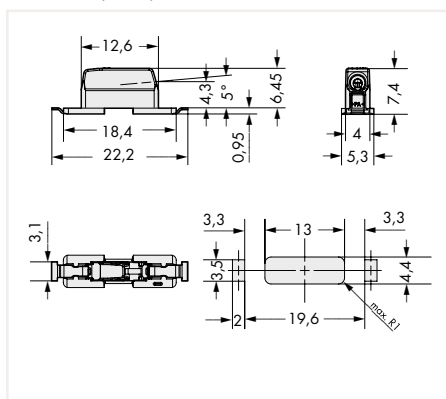


Pole No.	Item No.	Pack. Unit
1	2070-451/998-406	4770 (954)

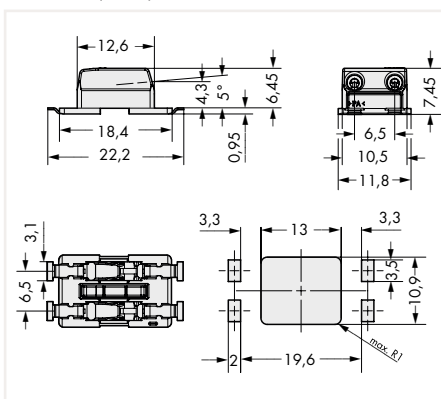
Pole No.	Item No.	Pack. Unit
2	2070-452/998-406	2385 (477)

Pole No.	Item No.	Pack. Unit
3	2070-453/998-406	1590 (318)

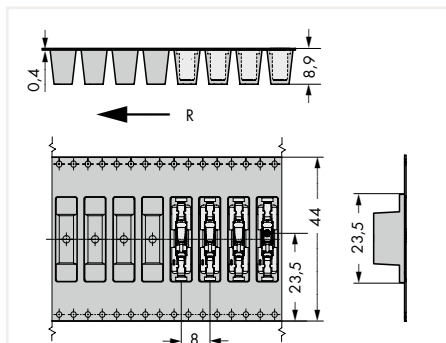
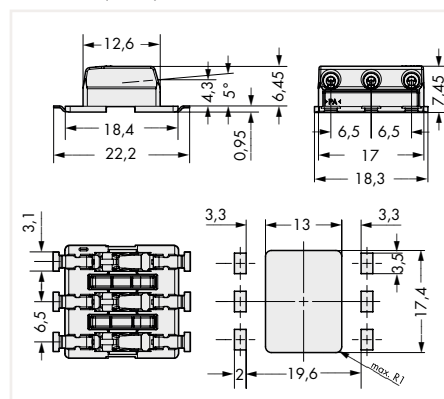
Dimensions (in mm):



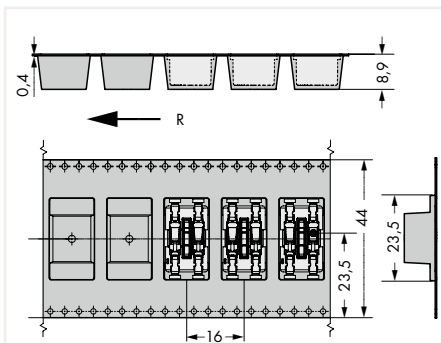
Dimensions (in mm):



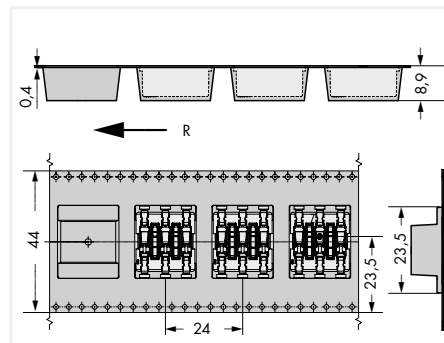
Dimensions (in mm):



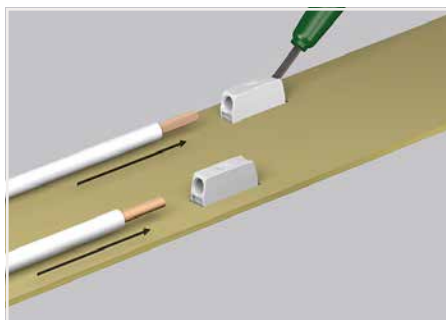
R = Feed direction



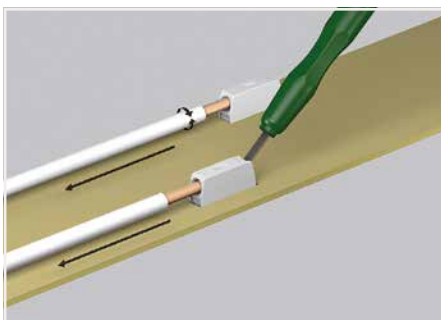
R = Feed direction



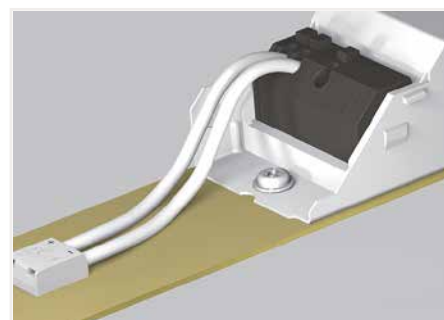
R = Feed direction



Insert fine-stranded conductors and remove all conductor types via operating tool. Solid conductors can also be terminated by simply pushing them in.



Use an operating tool or simply "twist and pull" to remove solid conductors.



Shift wiring to the back of the LED module via 2070 Series SMD PCB Terminal Blocks.

Other variants can be requested via the WAGO sales department or, if necessary, configured at <https://configurator.wago.com/>:

- Reel diameter of tape-and-reel packaging 381 mm

# Through-Board SMD PCB Terminal Block with Cover and Marking; in Tape-and-Reel Packaging; 0.75 mm<sup>2</sup>; Pin Spacing: 6.5 mm 2070 Series

Marking (+); Reel diameter: 330 mm



Marking (+ -); Reel diameter: 330 mm



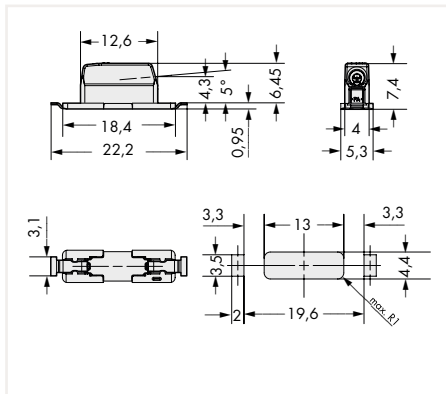
Marking (+ - plain); Reel diameter: 330 mm



1

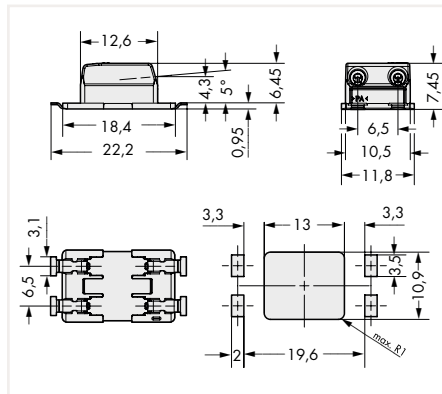
Pole No.	Item No.	Pack. Unit
1	2070-521/998-406	4770 (954)

Dimensions (in mm):



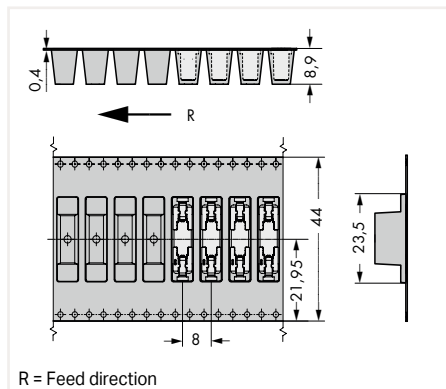
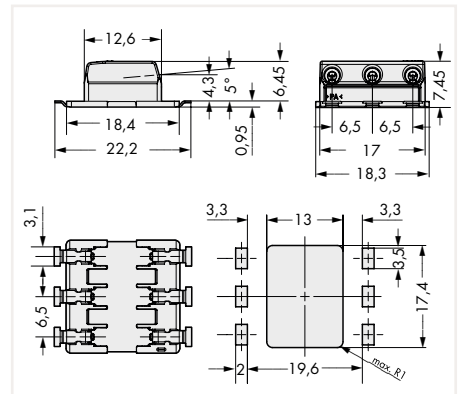
Pole No.	Item No.	Pack. Unit
2	2070-522/998-406	2385 (477)

Dimensions (in mm):

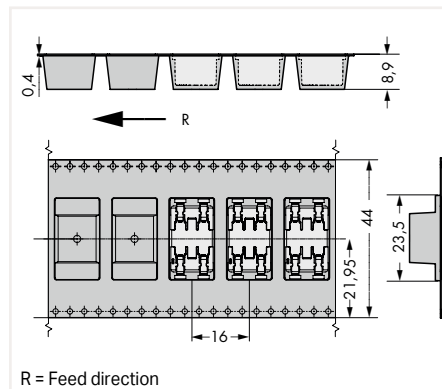


Pole No.	Item No.	Pack. Unit
3	2070-523/998-406	1590 (318)

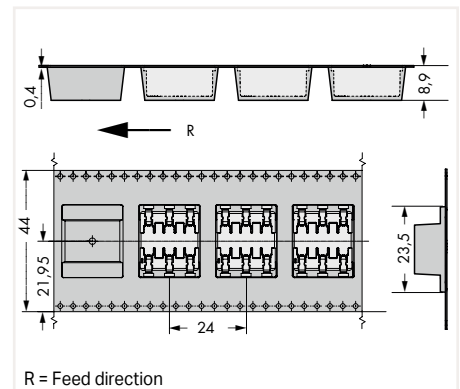
Dimensions (in mm):



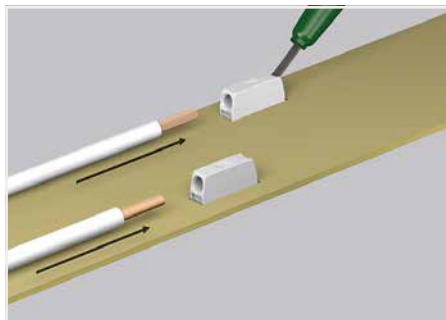
R = Feed direction



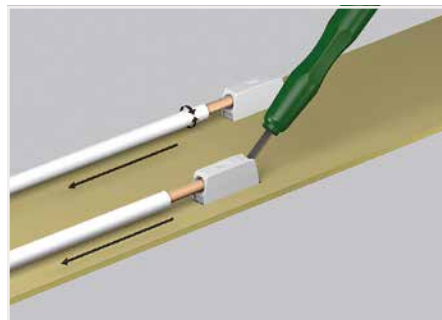
R = Feed direction



R = Feed direction



Insert fine-stranded conductors and remove all conductor types via operating tool. Solid conductors can also be terminated by simply pushing them in.



Use an operating tool or simply "twist and pull" to remove solid conductors.



The printed variants offer unique pole marking on the back of the module.

Other variants can be requested via the WAGO sales department or, if necessary, configured at <https://configurator.wago.com/>:

- Reel diameter of tape-and-reel packaging 381 mm

# Through-Board SMD PCB Terminal Block with Cover and Marking; in Tape-and-Reel Packaging; 0.75 mm<sup>2</sup>; Pin Spacing: 6.5 mm 2070 Series

PUSH-IN CAGE CLAMP®

Marking (-); Reel diameter: 330 mm

Marking (- +); Reel diameter: 330 mm

Marking (plain - +); Reel diameter: 330 mm

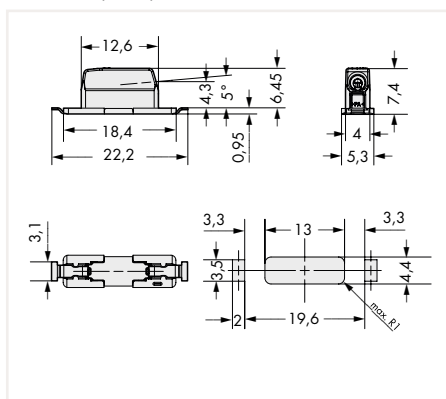


Pole No.	Item No.	Pack. Unit
1	2070-541/998-406	4770 (954)

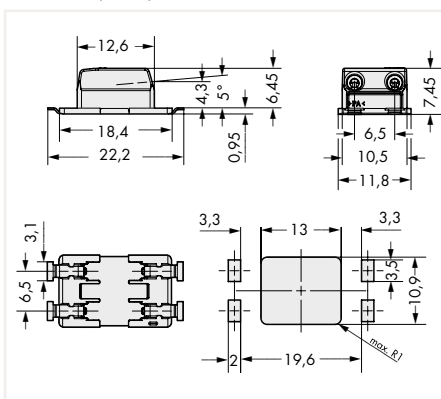
Pole No.	Item No.	Pack. Unit
2	2070-542/998-406	2385 (477)

Pole No.	Item No.	Pack. Unit
3	2070-543/998-406	1590 (318)

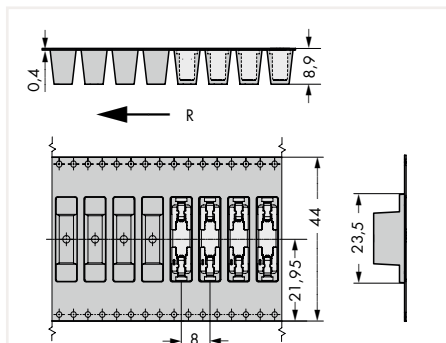
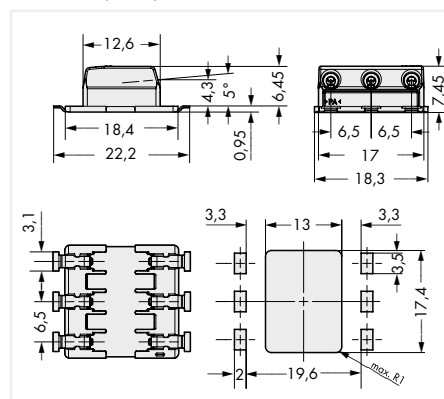
Dimensions (in mm):



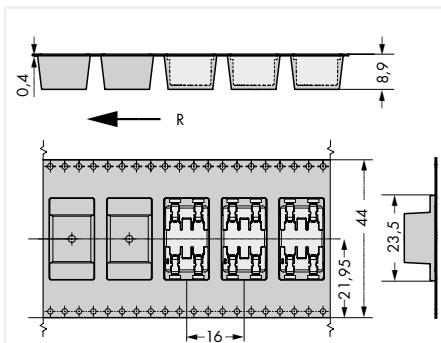
Dimensions (in mm):



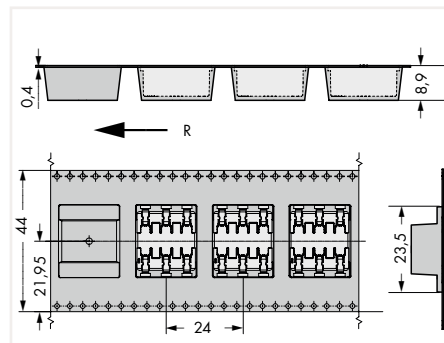
Dimensions (in mm):



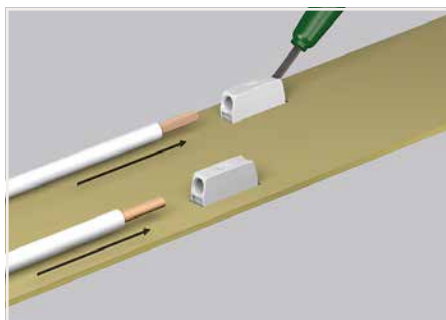
R = Feed direction



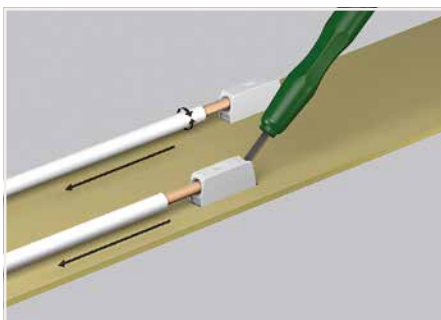
R = Feed direction



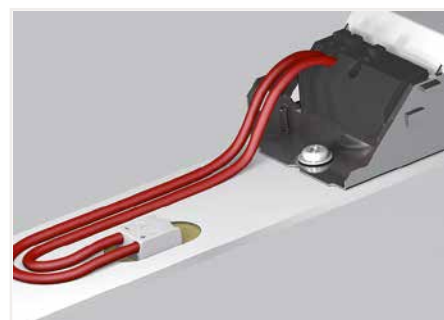
R = Feed direction



Insert fine-stranded conductors and remove all conductor types via operating tool. Solid conductors can also be terminated by simply pushing them in.



Use an operating tool or simply "twist and pull" to remove solid conductors.



The printed variants offer unique pole marking on the back of the module.

Other variants can be requested via the WAGO sales department or, if necessary, configured at <https://configurator.wago.com/>:

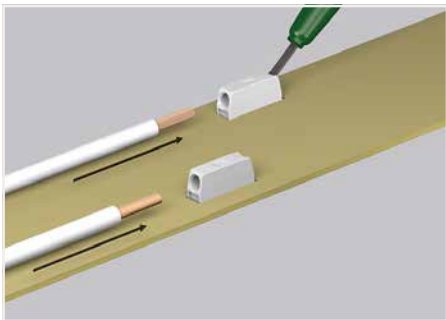
- Reel diameter of tape-and-reel packaging 381 mm

# Operating Tool 2070 Series

1



Item No.	Pack. Unit
2070-400	1



Insert fine-stranded conductors and remove all conductor types via operating tool. Solid conductors can also be terminated by simply pushing them in.



## Through-Board SMD PCB Terminal Block 2075 Series

1



- For vertical wiring
- Wiring performed on the back of the LED module simplifies lighting manufacturing
- Low installation height minimizes on-board LED shadowing
- Compact design provides uniform light distribution
- An economical alternative to wire soldering
- For manual and automated wiring systems

Electrical Data					
Width	3 mm / 0.118 inch				
Ratings per	IEC/EN 60664-1				
Overvoltage category	III	III	II		
Pollution degree	3	2	2		
Rated voltage	200 V	–	500 V		
Rated surge voltage	4 kV	–	4 kV		
Rated current	9 A	9 A	9 A		
Connection Data					
Connection technology	PUSH WIRE®				
Strip length	3.7 mm / 0.15 inch				
Conductor entry angle to the PCB	90°				
Conductor range					
Solid conductor	0.34 ... 0.75 mm² / 20 ... 18 AWG				
Material Data					
Limit temperature range	–60 ... +105 °C				
Contact material	Electrolytic copper (Ecu)				
Contact plating	Tin-plated				

### Note:

Terminal block without insulation housing!

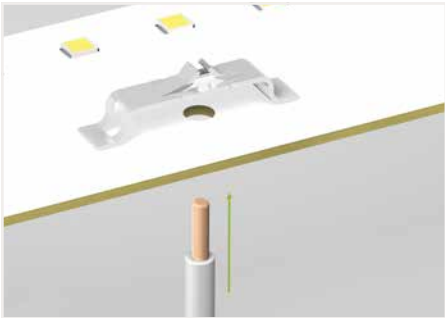
Protection against accidental contact must be provided at voltages higher than low voltages (e.g., SELV/PELV) for the relevant application.

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

# Through-Board SMD PCB Terminal Block in Tape-and-Reel Packaging; without Housing

## 2075 Series

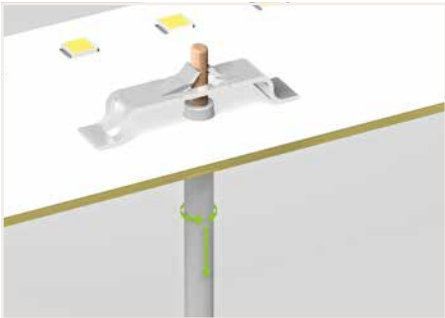
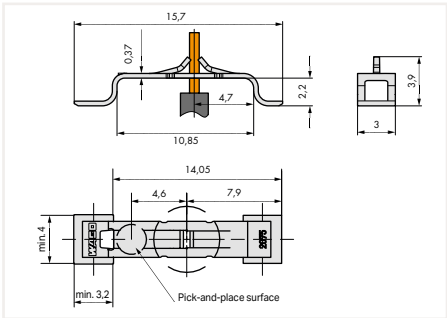
Reel diameter: 330 mm



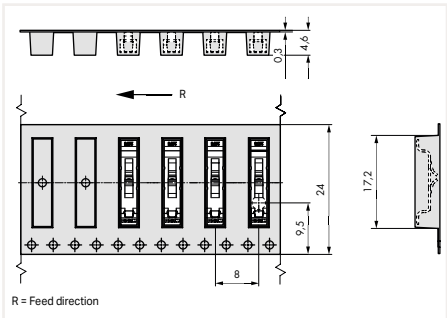
Push-in termination of solid conductors

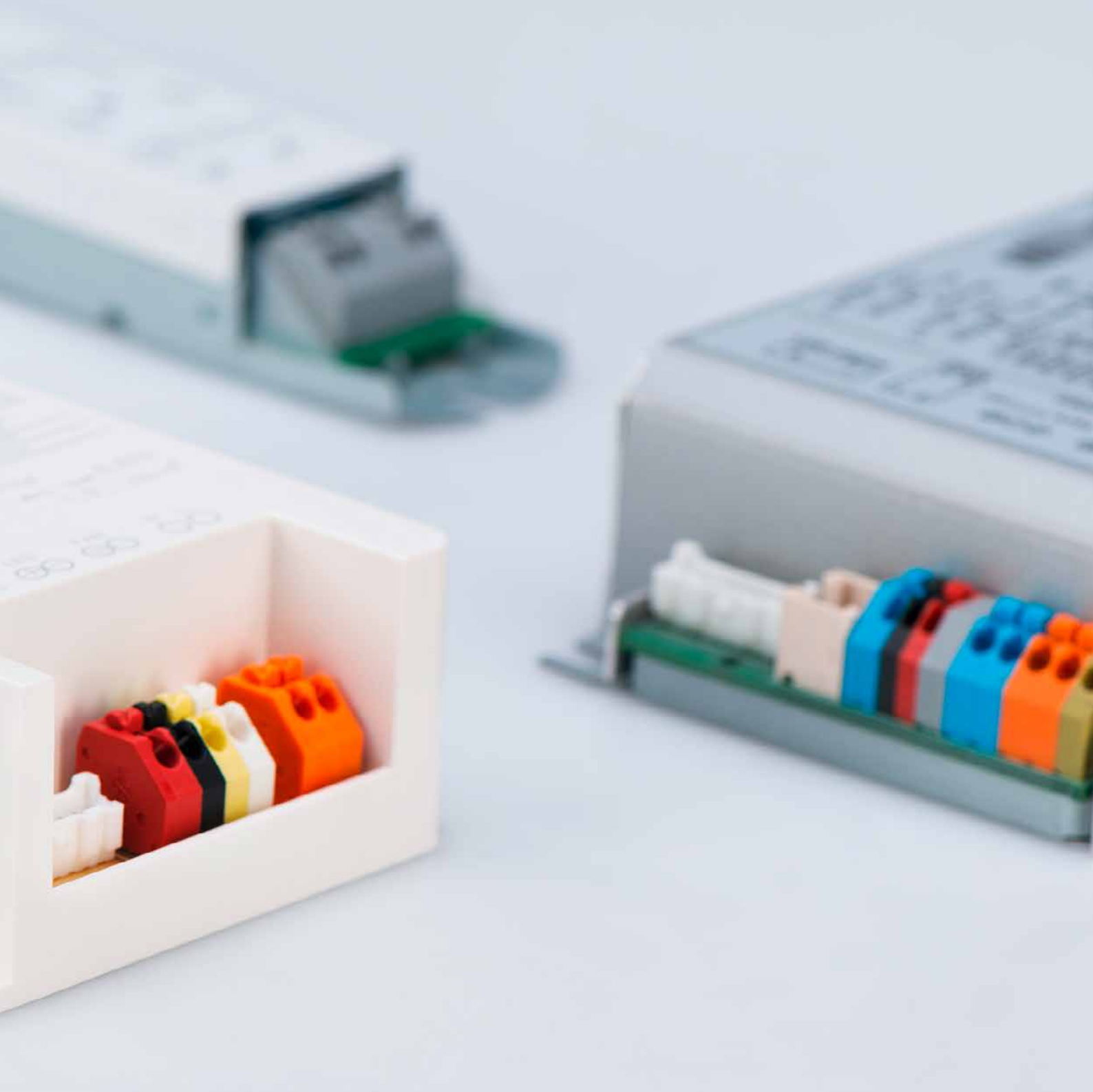
Pole No.	Item No.	Pack. Unit
1	2075-381/997-404	18000 (2000)

Dimensions (in mm):



Simply twist and pull to remove conductors – no tools required.





# WAGO PCB Terminal Blocks for Drivers and Electronics

## WAGO PCB Terminal Blocks for Drivers and Electronics

		Nominal Cross-Sections	Series	Page
	THR PCB Terminal Block with Push-Buttons and Push-in CAGE CLAMP® Connection	0.75 mm <sup>2</sup>	2060	46
		1.5 mm <sup>2</sup>	2061	50
		0.5 mm <sup>2</sup>	250	60
		1.5 mm <sup>2</sup>	250	62
			805	68
	PCB Terminal Strips with Push-Buttons and Push-in CAGE CLAMP® Connection	0.5 mm <sup>2</sup>	250	54
		1.5 mm <sup>2</sup>	250	56
			805	64
		2.5 mm <sup>2</sup>	804	70
	Modular PCB Terminal Blocks and PCB-Terminal Strips with Push-Buttons and Push-in CAGE CLAMP® Connection	1.5 mm <sup>2</sup>	235	72
	PCB Terminal Blocks with PUSH WIRE® Connection	1.5 mm <sup>2</sup>	744	78
	Modular PCB Terminal Blocks and PCB Terminal Strips with PUSH WIRE® Connection	2.5 mm <sup>2</sup>	235	80
	PCB Terminal Blocks with Push-Buttons and PUSH WIRE® Connection	1.5 mm <sup>2</sup>	735	84
	Two-Conductor PCB Terminal Strips with PUSH WIRE® Connection	1.5 mm <sup>2</sup>	253	88
	PCB Terminal Blocks with Levers and Push-in CAGE CLAMP® Connection	4 mm <sup>2</sup>	2604	90
	PCB Terminal Blocks with Push-in CAGE CLAMP® Connection	4 mm <sup>2</sup>	2624	94

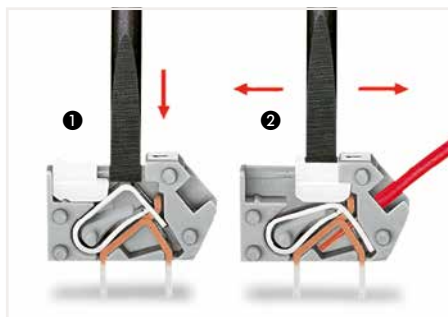
# PCB Terminal Blocks

## Description and Installation

### Product Overview by Pin Spacing

2

#### Actuation with Locking Slide/Push-Button/Lever



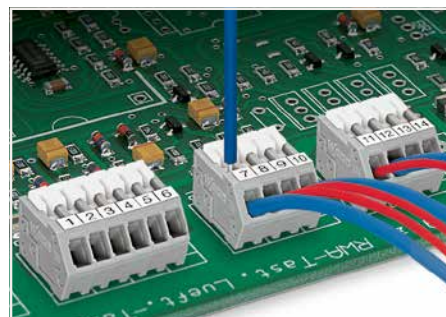
Conductor termination: ① To momentarily open the clamping unit, use screwdriver and then insert a stripped conductor. ② To open clamping unit for an extended period, move locking slide toward conductor entry hole. Then fully insert stripped conductor and move locking slide back to original position (also possible to perform with fingernail).

#### Actuation without Locking Slide/Push-Button/Lever

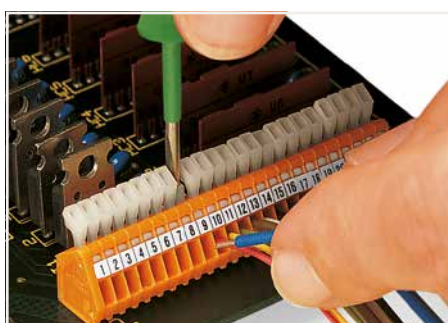


Inserting a conductor via operating tool (3.5 mm blade).  
Conductor entry and clamp operation are parallel.

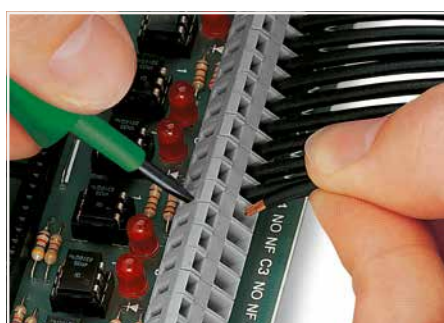
#### Testing



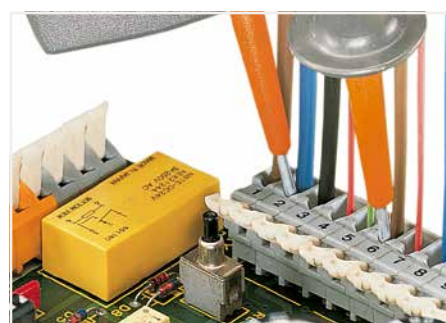
Inserting/removing a conductor.



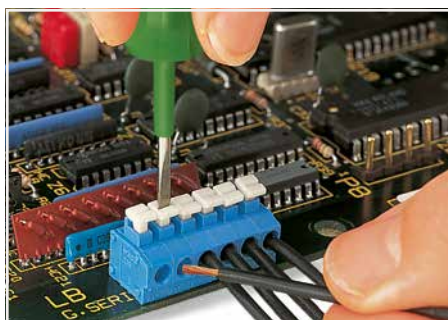
Inserting/removing a conductor.



Inserting a conductor via operating tool (3.5 mm blade).  
Screwdriver actuation perpendicular to conductor entry



Testing with test probes.



Inserting/removing fine-stranded conductors via push-button.

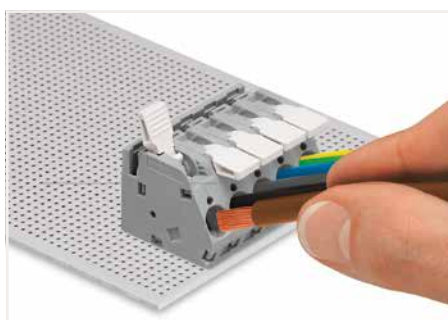


Removing a conductor without push-button.



Inserting/removing a conductor (257 Series) via finger-operated lever.

For terminal strips with finger-operated levers, see Full Line Catalog.



Inserting/removing a conductor – 2706 and 2716 Series.



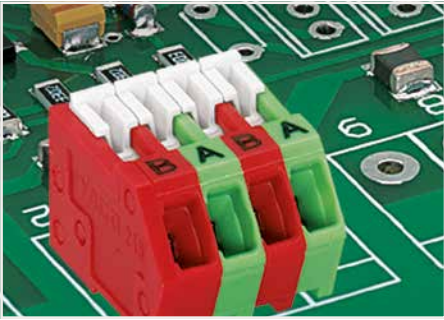
Inserting a conductor via operating tool (5.5 mm blade).



Testing with a 2 mm Ø test plug.



### Marking



Factory direct marking

### Commoning



Inserting a comb-style jumper bar.

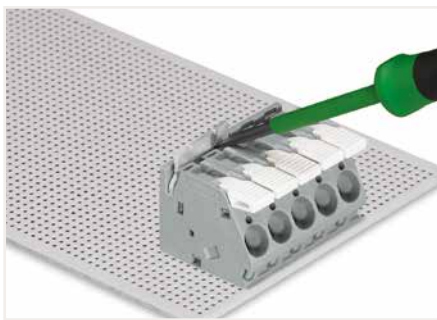
### Specialty Functions



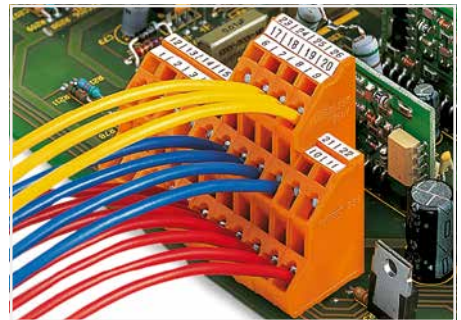
For terminal strips in other colors, please contact factory.



Marking via self-adhesive marking strips (above) or factory direct marking.



Push jumper bar down firmly using a screwdriver until it hits the backstop – 2706 and 2716 Series.



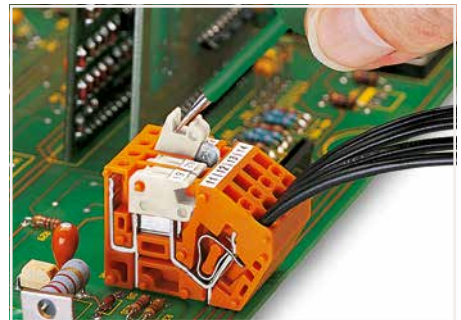
Space-saving triple-deck terminal strip



Mixed-color terminal strips with factory direct marking



Custom terminal strips are available upon request.



Opening a knife disconnect.

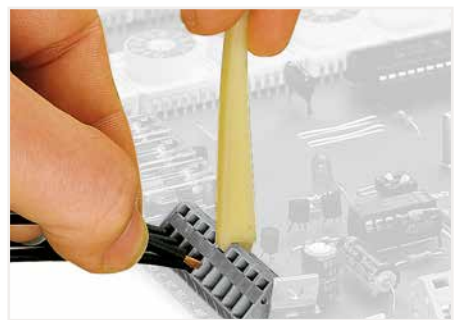


Marking via Mini-WSB and WMB markers or factory direct marking – 745 Series.



Horizontal commoning:  
Connection of adjacent terminals

Note: Interruption of horizontal commoning reduces spacing to the adjacent solder pins.



Inserting a conductor via operating tool.

## PCB Terminal Blocks

### Product Overview by Pin Spacing

Colors available:

-  green-yellow
-  gray
-  dark gray
-  light gray
-  white
-  orange
-  light green
-  black
-  blue
-  red
-  yellow
-  brown
-  green
-  violet
-  pink



Ex e II approval



Press-in technology



















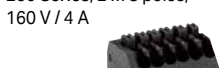









Through-hole reflow soldering



Surface-mount technology



Only available in this pin spacing

2.5 mm		2.54 mm		3.5 mm		3.81 mm	
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
233 Series; 2 ... 24 poles; 160 V / 6 A		233 Series; 2 ... 24 poles; 160 V / 6 A		739 Series; 2 ... 12 poles; 160 V / 17.5 A		739 Series; 2 ... 12 poles; 320 V / 17.5 A	
							
0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.08 ... 1.5 mm <sup>2</sup> / AWG 28 ... 14		0.08 ... 1.5 mm <sup>2</sup> / AWG 28 ... 14	
233-102 600		233-402 600		739-302 560		739-332 520	
233-124 80		233-424 80		739-312 100		739-342 100	
233 Series; 2 ... 24 poles; 160 V / 6 A		233 Series; 2 ... 24 poles; 160 V / 6 A		805 Series; 2 ... 24 poles; 320 V / 17.5 A		235 Series; 2 ... 48 poles; 320 V / 17.5 A	
							
0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.2 ... 1.5 mm <sup>2</sup> / AWG 24 ... 16		0.5 ... 1.5 mm <sup>2</sup> / AWG 20 ... 16	
233-202 600		233-502 600		805-102 580		235-101 520	
233-224 80		233-524 80		805-124 40		235-148 20	
234 Series; 2 ... 24 poles; 160 V / 6 A		234 Series; 2 ... 24 poles; 160 V / 6 A		805 Series; 2 ... 8 poles; 320 V / 17.5 A		235 Series; 2 ... 48 poles; 320 V / 17.5 A	
							
0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.2 ... 1.5 mm <sup>2</sup> / AWG 24 ... 16		0.5 ... 1.5 mm <sup>2</sup> "s" / AWG 20 ... 16 „sol.“	
234-202 600		234-502 600		805-302/200-604 600		235-101/330-000 520	
234-224 80		234-524 80		805-308/200-604 160		235-148/330-000 20	
250 Series; 2 ... 24 poles; 160 V / 4 A		250 Series; 2 ... 24 poles; 160 V / 4 A		250 Series; 2 ... 24 poles; 160 V / 8 A		735 Series; 2 ... 7 poles; 320 V / 10 A	
							
0.2 ... 0.5 mm <sup>2</sup> / AWG 24 ... 20		0.2 ... 0.5 mm <sup>2</sup> / AWG 24 ... 20		0.2 ... 1.5 mm <sup>2</sup> / AWG 24 ... 16		0.5 ... 1.5 mm <sup>2</sup> "s" / AWG 20 ... 16 „sol.“	
250-402 720		250-1402 720		250-102 560		735-122 660	
250-424 60		250-1424 60		250-124 40		735-127 180	
250 Series; 2 ... 8 poles; 160 V / 4 A				250 Series; 2 ... 8 poles; 320 V / 8 A			
	THR				THR		
0.2 ... 0.5 mm <sup>2</sup> / AWG 24 ... 20				0.2 ... 1.5 mm <sup>2</sup> / AWG 24 ... 16			
250-402/350-604 720				250-202/353-604 560			
250-408/350-604 220				250-208/353-604 160			
218 Series; 2 ... 24 poles; 160 V / 6 A		218 Series; 2 ... 24 poles; 160 V / 6 A		739 Series; 3 ... 12 poles; 160 V / 4 A		739 Series; 3 ... 12 poles; 160 V / 4 A	
							
0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.08 ... 1.5 mm <sup>2</sup> / AWG 28 ... 14		0.08 ... 1.5 mm <sup>2</sup> / AWG 28 ... 14	
218-102 1000		218-502 1000		739-303/100-000 400		739-333/100-000 360	
218-124 60		218-524 60		739-312/100-000 100		739-342/100-000 100	
218 Series; 2 ... 7 poles; 160 V / 6 A		218 Series; 2 ... 7 poles; 160 V / 6 A		744 Series; 2 ... 10 poles; 320 V / 2 A			
	THR		THR				
0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.08 ... 0.5 mm <sup>2</sup> / AWG 28 ... 20		0.5 ... 1.5 mm <sup>2</sup> "s" / AWG 20 ... 16 „sol.“			
218-102/000-604 1000		218-502/000-604 1000		744-292 1000			
218-107/000-604 240		218-507/000-604 240		744-210 200			
				251 Series; 2 ... 7 poles; 320 V / 2 A (6 A)			
							
				0.5 ... 1.5 mm <sup>2</sup> "s" / AWG 20 ... 16 „sol.“			
				251-102 600			
				251-107 180			

## PCB Terminal Blocks

### Product Overview by Pin Spacing

5 mm							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
236 Series; 2 ... 48 poles; 320 V / 24 A		236 Series; 2 ... 6 poles; 320 V / 24 A		742 Series; 1 ... 3 conductors; 320 V / 16 A		235 Series; 2 ... 12 poles; 320 V / 17.5 A	
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 1.5 mm <sup>2</sup> / AWG 20 ... 14	
236-101 420		236-402/334-604 420		742-101 384		235-402/331-000 420	
236-148 20		236-406/334-604 140		742-153 100		235-412/331-000 60	
736 Series; 2 x 2 ... 24 x 2 poles; 320 V / 21 A		740 Series; 2 ... 24 poles; 320 V / 16 A		742 Series; 1 conductor/2 conductors; 320 V / 16 A		2604 Series; 2 ... 12 poles; with lever; 400 V / 32 A	
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.2 ... 4 mm <sup>2</sup> / AWG 24 ... 12	
736-102 161		740-102 460		742-121 300		2604-1102 200	
736-124 14		740-124 40		742-178 200		2604-1112 30	
737 Series; 2 x 3 ... 24 x 3 poles; 320 V / 21 A		253 Series; 2 ... 16 poles; 320 V / 17.5 A		742 Series; 1 ... 3 conductors; 320 V / 15 A		2624 Series; 2 ... 12 poles; 400 V / 41 A	
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 1.5 mm <sup>2</sup> "s" / AWG 20 ... 16 „sol.“		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.2 ... 6 mm <sup>2</sup> / AWG 24 ... 10	
737-102 92		253-102 400		742-111 300		2624-1102 200	
737-124 8		253-116 40		742-163 100		2624-1112 35	
738 Series; 2 x 4 ... 24 x 4 poles; 320 V / 18 A		250 Series; 2 ... 16 poles; 320 V / 17.5 A		741 Series; 2 ... 16 poles; 320 V / 16 A		231 Series; 2 ... 12 poles; 320 V / 16 A	
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 1.5 mm <sup>2</sup> / AWG 20 ... 16		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12	
738-102 72		250-502 400		741-102 400		231-602/017-000 100	
738-124 6		250-516 40		741-116 40		231-612/017-000 25	
255 Series; 2 ... 48 poles; 320 V / 24 A		250 Series; 2 ... 24 poles; 320 V / 10 A		735 Series; 2 ... 7 poles; 320 V / 10 A		731 Series; 2 ... 12 poles; 320 V / 5 A	
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 1.5 mm <sup>2</sup> / AWG 20 ... 16		0.5 ... 1.5 mm <sup>2</sup> "s" / AWG 20 ... 16 „sol.“		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12	
255-401 400		250-702 264		735-302 500		731-132 50	
255-448 20		250-724 24		735-307 140		731-142/048-000 25	
256 Series; 2 ... 48 poles; 320 V / 24 A		816 Series; 2 ... 12 poles; 320 V / 14 A		235 Series; 2 ... 48 poles; 320 V / 24 A			
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		2 x 0.2 ... 1.5 mm <sup>2</sup> / 2 x AWG 24 ... 16		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 14 „sol.“			
256-401 400		816-102 400		235-402 421			
256-448 20		816-112 60		235-448 20			
257 Series; 2 ... 48 poles; 320 V / 24 A		254 Series; 2 ... 48 poles; 320 V / 24 A		745 Series; 2 ... 12 poles; 320 V / 32 A			
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 12 „sol.“		0.08 ... 4 mm <sup>2</sup> / AWG 28 ... 12			
257-401 400		254-451 420		745-3102 276			
257-448 20		254-498 20		745-3112 48			
739 Series; 2 ... 24 poles; 320 V / 24 A		804 Series; 2 ... 16 poles; 320 V / 24 A		745 Series; 2 ... 12 poles; 320 V / 32 A			
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.25 ... 2.5 mm <sup>2</sup> / AWG 20 ... 12		0.08 ... 4 mm <sup>2</sup> / AWG 28 ... 12			
739-102 400		804-102 420		745-102 230			
739-124 20		804-116 60		745-112 40			

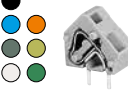


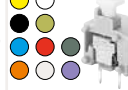

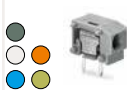



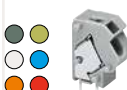


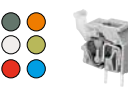





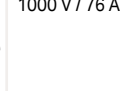













## 2

42 WAGO Connection Technology for Lighting and Electrical Equipment 

## PCB Terminal Blocks

### Product Overview by Pin Spacing

7.62 mm				10 mm			
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
236 Series; 2 ... 24 poles; 630 V / 24 A		235 Series; 2 ... 24 poles; 630 V / 17.5 A		236 Series; 2 ... 24 poles; 1000 V / 10 A	Ex	235 Series; 2 ... 24 poles; 1000 V / 17.5 A	Ex
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 1.5 mm <sup>2</sup> / AWG 20 ... 14		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 1.5 mm <sup>2</sup> / AWG 20 ... 14	
236-201 280		235-501/331-000 280		236-301 200		235-801/331-000 220	
236-224 20		235-524/331-000 20		236-324 20		235-824/331-000 20	
736 Series; 2 x 2 ... 16 x 2 poles; 630 V / 21 A		235 Series; 2 ... 24 poles; 630 V / 24 A		736 Series; 2 x 2 ... 12 x 2 poles; 1000 V / 21 A		235 Series; 2 ... 24 poles; 1000 V / 24 A	
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 14 „sol.“		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 14 „sol.“	
736-602 133		235-501 280		736-702 112		235-801 220	
736-616 14		235-524 20		736-712 14		235-824 20	
737 Series; 2 x 3 ... 16 x 3 poles; 630 V / 21 A		254 Series; 2 ... 24 poles; 630 V / 24 A		737 Series; 2 x 3 ... 12 x 3 poles; 1000 V / 21 A		254 Series; 2 ... 24 poles; 1000 V / 24 A	
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 12 „sol.“		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 12 „sol.“	
737-602 76		254-551 280		737-702 64		254-651 280	
737-616 8		254-574 20		737-712 8		254-674 20	
255 Series; 2 ... 24 poles; 630 V / 24 A	Ex	741 Series; 2 ... 10 poles; 630 V / 16 A		255 Series; 2 ... 24 poles; 1000 V / 24 A	Ex	741 Series; 2 ... 8 poles; 1000 V / 16 A	
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12	
255-501 280		741-402 320		255-601 200		741-502 280	
255-524 20		741-410 60		255-624 20		741-508 60	
256 Series; 2 ... 24 poles; 320 V / 24 A	Ex			256 Series; 2 ... 24 poles; 630 V / 24 A	Ex	2616 Series; 2 ... 12 poles; with lever; 1000 V / 76 A	
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12				0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.75 ... 16 mm <sup>2</sup> / AWG 18 ... 4	
256-501 280				256-601 200		2616-1102/020-000 50	
256-524 20				256-624 20		2616-1112/020-000 10	
257 Series; 2 ... 24 poles; 630 V / 24 A	Ex			257 Series; 2 ... 24 poles; 1000 V / 24 A	Ex	2636 Series; 2 ... 12 poles; 1000 V / 76 A	
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12				0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.75 ... 16 mm <sup>2</sup> / AWG 18 ... 4	
257-501 280				257-601 200		2636-1102/020-000 50	
257-524 20				257-624 20		2636-1112/020-000 15	
739 Series; 2 ... 12 poles; 630 V / 24 A				739 Series; 2 ... 12 poles; 630 V / 24 A		2706 Series; 2 ... 12 poles; 1000 V / 41 A	
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12				0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 6 mm <sup>2</sup> / AWG 20 ... 10	
739-232 340				739-3202 280		2706-202 70	
739-242 40				739-3212 40		2706-212 10	
739 Series; 3 ... 12 poles; 630 V / 8 A				745 Series; 2 ... 12 poles; 1000 V / 32 A	Ex	2706 Series; 2 ... 12 poles; 1000 V / 41 A	
							
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12				0.08 ... 4 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 6 mm <sup>2</sup> / AWG 20 ... 10	
739-233/100-000 220				745-3202 192		2706-252 70	
739-242/100-000 40				745-3212 24		2706-262 10	
						2716 Series; 2 ... 8 poles; 320 V / 75 A	
							
						1.5 ... 16 mm <sup>2</sup> / AWG 16 ... 6	
						2716-102 65	
						2716-108 15	
						2716 Series; 2 ... 8 poles; 1000 V / 76 A	
							
						1.5 ... 16 mm <sup>2</sup> / AWG 16 ... 6	
						2716-152 52	
						2716-158 12	




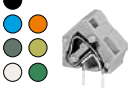









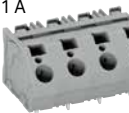



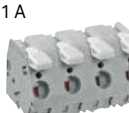









2



## PCB Terminal Blocks

















### Product Overview by Pin Spacing

2

10.16 mm				11.5 mm		12.5 mm		15 mm	
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
236 Series; 2 ... 24 poles; 1000 V / 10 A		235 Series; 2 ... 24 poles; 1000 V / 17.5 A		2604 Series; 2 ... 12 poles; with lever; 1000 V / 32 A		745 Series; 2 ... 12 poles; 1000 V / 32 A		745 Series; 2 ... 12 poles; 1000 V / 41 A	
									
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 1.5 mm <sup>2</sup> / AWG 20 ... 14		0.2 ... 4 mm <sup>2</sup> / AWG 24 ... 12		0.08 ... 4 mm <sup>2</sup> / AWG 28 ... 12		0.2 ... 6 mm <sup>2</sup> / AWG 24 ... 10	
236-301 200		235-801/331-000 220		2604-1502 130		745-3252 168		745-1452 64	
236-324 20		235-824/331-000 20		2604-1512 15		745-3262 12		745-1462 8	
736 Series; 2 x 2 ... 12 x 2 poles; 1000 V / 21 A		235 Series; 2 ... 24 poles; 1000 V / 24 A		2624 Series; 2 ... 12 poles; 1000 V / 41 A		745 Series; 2 ... 12 poles; 1000 V / 41 A		745 Series; 2 ... 5 poles; 1000 V / 76 A	
									
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 14 „sol.“		0.2 ... 6 mm <sup>2</sup> / AWG 24 ... 10		0.2 ... 6 mm <sup>2</sup> / AWG 24 ... 10		0.2 ... 16 mm <sup>2</sup> / AWG 24 ... 6	
736-802 112		235-801 220		2624-1502 100		745-1402 80		745-602/006-000 36	
736-812 14		235-824 20		2624-1512 20		745-1412 8		745-605/006-000 12	
737 Series; 2 x 3 ... 12 x 3 poles; 1000 V / 21 A		254 Series; 2 ... 24 poles; 1000 V / 24 A				2706 Series; 2 ... 12 poles; 1000 V / 41 A		2716 Series; 2 ... 8 poles; 1000 V / 76 A	
									
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.5 ... 2.5 mm <sup>2</sup> "s" / AWG 20 ... 12 „sol.“				0.5 ... 6 mm <sup>2</sup> / AWG 20 ... 10		1.5 ... 16 mm <sup>2</sup> / AWG 16 ... 6	
737-802 64		254-651 280				2706-302 65		2716-202 50	
737-812 8		254-674 20				2706-312 5		2716-208 10	
255 Series; 2 ... 24 poles; 1000 V / 24 A		741 Series; 2 ... 8 poles; 1000 V / 16 A						2716 Series; 2 ... 8 poles; 1000 V / 76 A	
									
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12		0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12						1.5 ... 16 mm <sup>2</sup> / AWG 16 ... 6	
255-601 200		741-602 280						2716-252 40	
255-624 20		741-608 60						2716-258 8	
256 Series; 2 ... 24 poles; 630 V / 24 A									
									
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12									
256-601 200									
256-624 20									
257 Series; 2 ... 24 poles; 1000 V / 24 A									
									
0.08 ... 2.5 mm <sup>2</sup> / AWG 28 ... 12									
257-601 200									
257-624 20									

## PCB Terminal Blocks

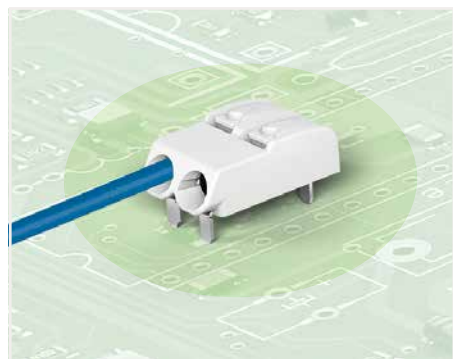
### Product Overview by Pin Spacing; Pluggable PCB Terminal Block; Jumper

20 mm		Pluggable PCB Terminal Block		Jumper	
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
745 Series; 2 ... 5 poles; 1000 V / 76 A 		252 Series; 2 ... 10 poles; 320 V / 2 A 		Comb-style jumper bar; 5 mm pin spacing; for 745 Series – 4 mm² 	
 0.2 ... 16 mm² / AWG 24 ... 6 745-652/006-000 32 745-655/006-000 8		Ø 2 x 0.4 ... 0.8 mm "s" / 2 x AWG 26 ... 20 "sol." 252-102 600 252-110 150	3.5	745-181 250 745-185 200	
		252 Series; 2 ... 10 poles; 320 V / 2 A 		Comb-style jumper bar; 7.5 mm pin spacing; for 745 Series – 4 mm² 	
		Ø 2 x 0.4 ... 0.8 mm "s" / 2 x AWG 26 ... 20 "sol." 252-152 600 252-160 150	3.5	745-191 250 745-195 200	
		243 Series; 2 ... 8 poles; 320 V / 6 A 		Comb-style jumper bar; 10 mm pin spacing; for 745 Series – 4 mm² 	
		 Ø 4 x 0.4 ... 1.0 mm / 4 x AWG 24 ... 18 243-742 50 243-748 50	5.75	745-281 250 745-285 200	
		806 Series; 2 ... 12 poles; 320 V / 10 A 		Comb-style jumper bar; 7.5 mm pin spacing; for 745 Series and 2706 Series – 6 mm² 	
		 2 x 0.2 ... 1.5 mm² / 2 x AWG 24 ... 16 806-102 400 806-112 60	5	745-381 250 745-385 200	
				Comb-style jumper bar; 10 mm pin spacing; for 745 Series and 2706 Series – 6 mm² 	
				745-391 250 745-395 200	
				Comb-style jumper bar; 10 mm pin spacing; for 745 Series and 2716 Series – 16 mm² 	
				745-582 400 745-585 200	
				Comb-style jumper bar; 15 mm pin spacing; for 745 Series and 2716 Series – 16 mm² 	
				745-631 200 745-635 200	
				Comb-style jumper bar; 20 mm pin spacing; for 745 Series and 2716 Series – 16 mm² 	
				745-681 300 745-685 200	

## THR PCB Terminal Block with Push-Buttons; 0.75 mm<sup>2</sup>

Pin Spacing: 4 mm

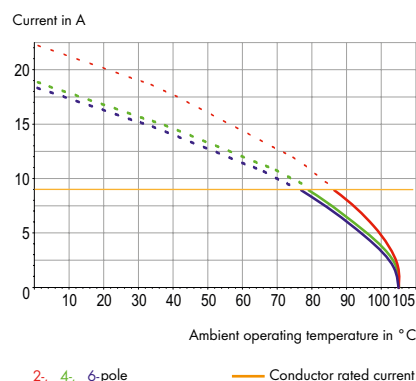
2060 Series



- THR PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Just 4.5 mm tall
- Available in tape-and-reel packaging for automated assembly
- Also suitable for wave soldering

### Current-Carrying Capacity Curve

Pin spacing: 4 mm / Conductor cross-section: 0.75 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



Electrical Data	1-pole			2-/3-pole		
Pin spacing	4 mm / 0.157 inch			4 mm / 0.157 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	63 V	160 V	320 V	63 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Rated current	9 A	9 A	9 A	9 A	9 A	9 A
Approvals per	UL 1977			UL 1977		
Rated voltage	600 V			320 V		
Rated current	9 A			9 A		

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	6 ... 7 mm / 0.24 ... 0.28 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.34 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.34 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	2.4 mm
Solder pin dimensions	1.2 x 0.75 mm
Plated through-hole diameter	1.5 <sup>+1.0</sup> mm

### Material Data

Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

#### Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

#### Recommendation for stencil:

150 µm material thickness

The stencil hole diameter is identical to the outer diameter of the metal-plated PCB hole.

\*(III / 2) Δ Overvoltage category III /  
Pollution degree 2

THR PCB Terminal Block with Push-Buttons; in Tape-and-Reel Packaging;

0.75 mm²; Pin Spacing: 4 mm

2060 Series

2 solder pins/pole; White\*; Reel diameter: 330 mm

2 solder pins/pole; Black; Reel diameter: 330 mm

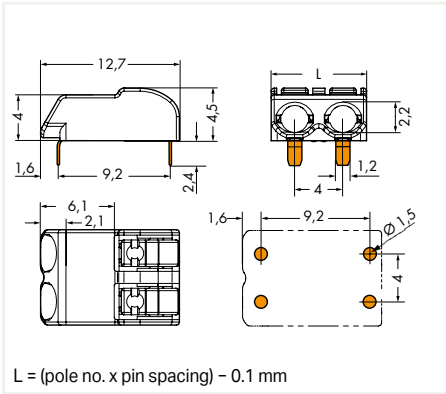


Push-in termination of solid conductors

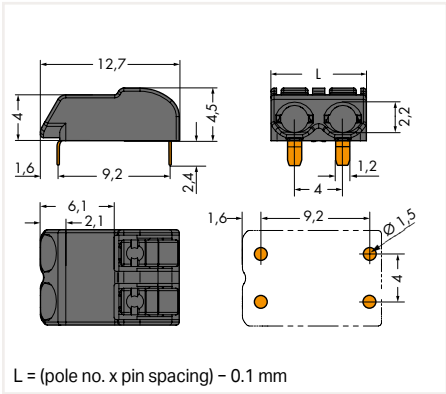
Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
1	2060-1451/998-404	10800 (1200)	1	2060-1471/998-404	10800 (1200)
2	2060-1452/998-404	6750 (750)	2	2060-1472/998-404	6750 (750)
3	2060-1453/998-404	4950 (550)	3	2060-1473/998-404	4950 (550)

\*Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.

Dimensions (in mm):

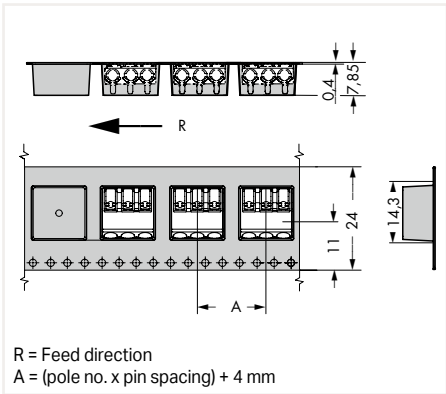


Dimensions (in mm):

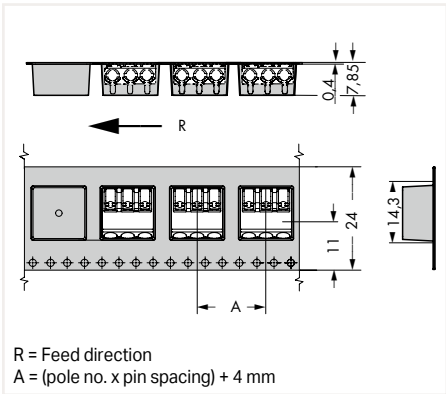


Inserting/removing fine-stranded conductors by lightly pressing on a push-button (e.g., via 206-860 Operating Tool).

Dimensions (in mm):



Dimensions (in mm):



Available in tape-and-reel packaging for automated assembly

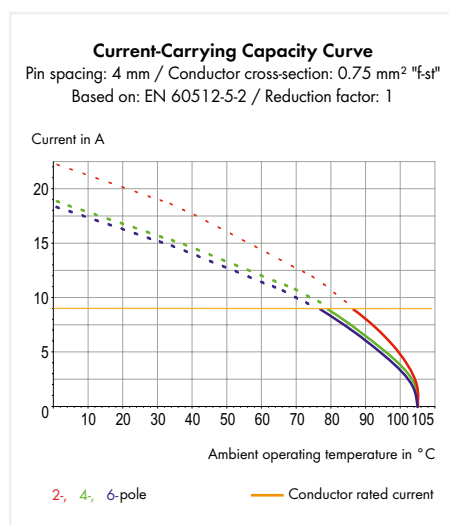
## THR PCB Terminal Block with Push-Buttons; 0.75 mm<sup>2</sup>

Pin Spacing: 8 mm

2060 Series



- THR PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Just 4.5 mm tall
- Available in tape-and-reel packaging for automated assembly
- Also suitable for wave soldering



Electrical Data				
Pin spacing	8 mm / 0.314 inch			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	400 V	630 V	1000 V	
Rated surge voltage	6 kV	6 kV	6 kV	
Rated current	9 A	9 A	9 A	
Approvals per	UL 1977			
Rated voltage	600 V			
Rated current	9 A			

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	6 ... 7 mm / 0.24 ... 0.28 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor	0.2 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.34 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.34 mm <sup>2</sup>

Solder Pin Data	
Solder pin length	2.4 mm
Solder pin dimensions	1.2 x 0.75 mm
Plated through-hole diameter	1.5 <sup>+1.0</sup> mm

Material Data	
Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

### Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

### Recommendation for stencil:

150 µm material thickness

The stencil hole diameter is identical to the outer diameter of the metal-plated PCB hole.

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

# THR PCB Terminal Block with Push-Buttons; in Tape-and-Reel Packaging; 0.75 mm<sup>2</sup>; Pin Spacing: 8 mm 2060 Series

2 solder pins/pole; White\*; Reel diameter: 330 mm



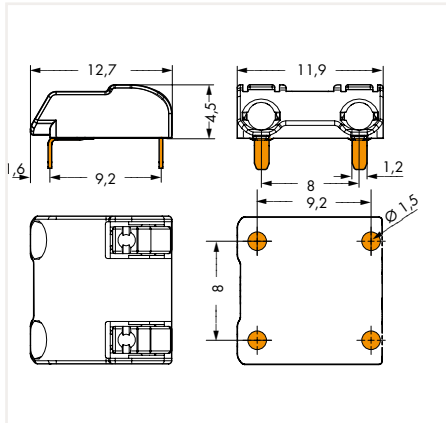
2 solder pins/pole; Black; Reel diameter: 330 mm



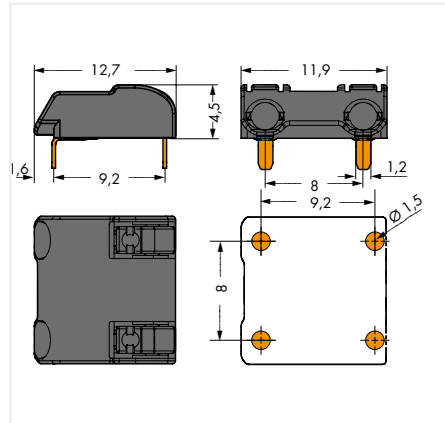
Pole No.	Item No.	Pack. Unit
2	2060-1852/998-404	4950 (550)

\*Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.

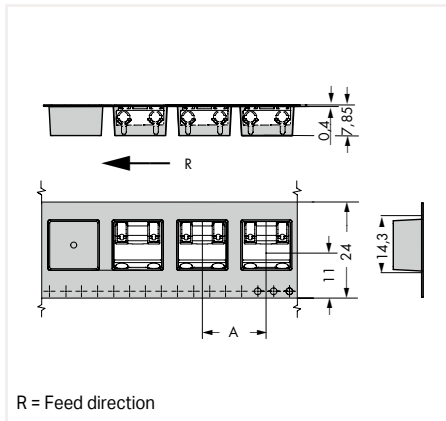
Dimensions (in mm):



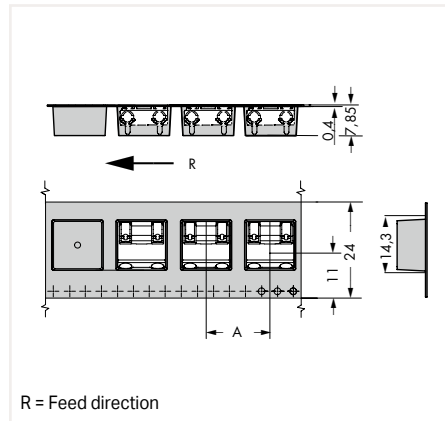
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



Inserting solid conductors via push-in termination (picture shows 2060 Series).



Inserting/removing fine-stranded conductors by lightly pressing on a push-button (e.g., via 206-860 Operating Tool).



Available in tape-and-reel packaging for automated assembly

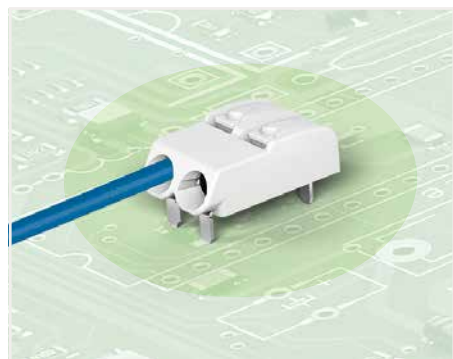
2



## THR PCB Terminal Block with Push-Buttons; 1.5 mm<sup>2</sup>

Pin Spacing: 6 mm

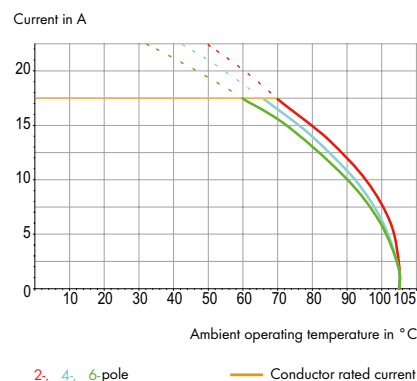
2061 Series



- THR PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Just 5.6 mm tall
- Available in tape-and-reel packaging for automated assembly
- Also suitable for wave soldering
- Assemble terminal blocks without pole loss

### Current-Carrying Capacity Curve

Pin spacing: 6 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "s"  
Based on: EN 60512-5-2 / Reduction factor: 1



Electrical Data	1-pole			2-/3-pole		
Pin spacing	6 mm / 0.157 inch			6 mm / 0.157 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	250 V	320 V	630 V	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Rated current	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	7 ... 10 mm / 0.28 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.5 ... 0.75 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 0.75 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	2.4 mm
Solder pin dimensions	1.2 x 0.75 mm
Plated through-hole diameter	1.5 <sup>+1.0</sup> mm

### Solder Pin Data

Solder pin length	1.5 mm
Solder pin dimensions	1.2 x 0.75 mm
Plated through-hole diameter	1.5 <sup>+1.0</sup> mm

### Material Data

Material group	I
Insulating material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

#### Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

#### Recommendation for stencil:

150 µm material thickness

The stencil hole diameter is identical to the outer diameter of the metal-plated PCB hole.

\*(III / 2) Δ Overvoltage category III /  
Pollution degree 2

# THR PCB Terminal Block with Push-Buttons; in Tape-and-Reel Packaging; 1.5 mm<sup>2</sup>; Pin Spacing: 6 mm 2061 Series

2 solder pins/pole; White\*; Reel diameter: 330 mm



2 solder pins/pole; Black; Reel diameter: 330 mm



Push-in termination of solid conductors

2.4 mm long solder pin

Pole No.	Item No.	Pack. Unit
1	2061-1601/998-404	5760 (640)
2	2061-1602/998-404	4320 (480)
3	2061-1603/998-404	2880 (320)

2.4 mm long solder pin

Pole No.	Item No.	Pack. Unit
1	2061-1621/998-404	5760 (640)
2	2061-1622/998-404	4320 (480)
3	2061-1623/998-404	2880 (320)

1.5 mm long solder pin

Pole No.	Item No.	Pack. Unit
1	2061-1641/998-404	5760 (640)
2	2061-1642/998-404	4320 (480)
3	2061-1643/998-404	2880 (320)

1.5 mm long solder pin

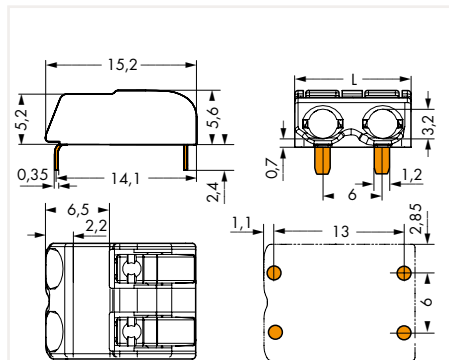
Pole No.	Item No.	Pack. Unit
1	2061-1661/998-404	5760 (640)
2	2061-1662/998-404	4320 (480)
3	2061-1663/998-404	2880 (320)

\*Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.



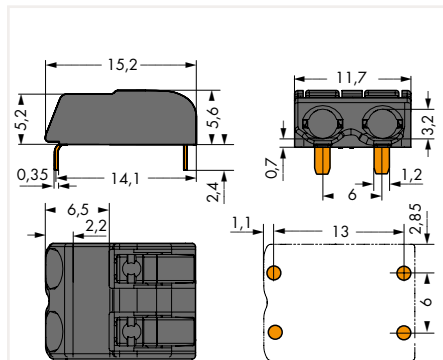
Inserting/removing fine-stranded conductors by lightly pressing on a push-button (e.g., via 206-861 Operating Tool).

Dimensions (in mm):



L = (pole no. x pin spacing) - 0.3 mm

Dimensions (in mm):

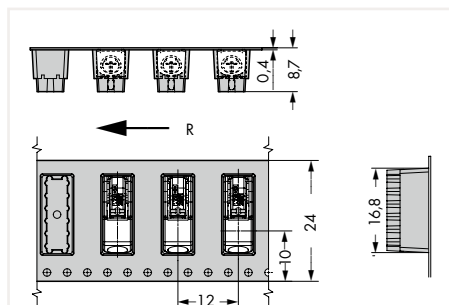


L = (pole no. x pin spacing) - 0.3 mm



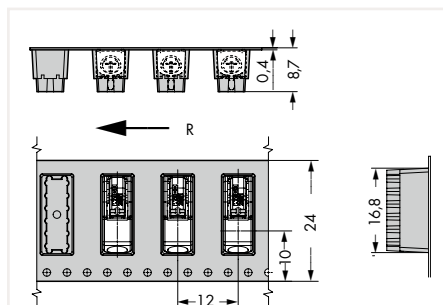
Available in tape-and-reel packaging for automated assembly

Dimensions (in mm):



R = Feed direction  
A = 12 mm (1-pole)  
A = 16 mm (2-pole)  
A = 22 mm (3-pole)

Dimensions (in mm):



R = Feed direction  
A = 12 mm (1-pole)  
A = 16 mm (2-pole)  
A = 22 mm (3-pole)

## PCB Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole; 0.5 mm<sup>2</sup>

Pin Spacing: 2.5 mm; 2.54 mm

250 Series

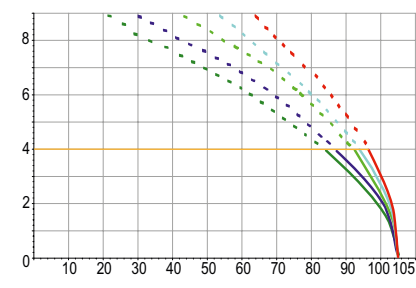


- Compact PCB terminal strips with push-buttons
- Push-in termination of solid conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring
- Custom color combinations
- Terminal strips also available with spacers upon request

### Current-Carrying Capacity Curve

Pin spacing: 2.5 mm / Conductor cross-section: 0.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1

Current in A



2, 4, 6, 12, 24-pole

Conductor rated current

### Electrical Data

Pin spacing	2.5 mm / 0.098 inch			2.54 mm / 0.1 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	160 V	160 V	320 V	160 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV	2.5 kV
Rated current	4 A	4 A	4 A	4 A	4 A	4 A

Approvals per	UL 1059			UL 1059		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	600 V
Rated current	5 A	–	5 A	5 A	–	5 A

Approvals per	CSA			CSA		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V
Rated current	2 A	–	2 A	2 A	–	2 A

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	8.5 ... 9.5 mm / 0.32 ... 0.36 inch
Conductor entry angle to the PCB	45°
Conductor range	
Solid conductor	0.14 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG
Fine-stranded conductor	0.2 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG

### Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.75 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

# PCB Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole; 0.5 mm<sup>2</sup>; Pin Spacing: 2.5 mm; 2.54 mm 250 Series

Pin spacing: 2.5 mm / 0.098 inch

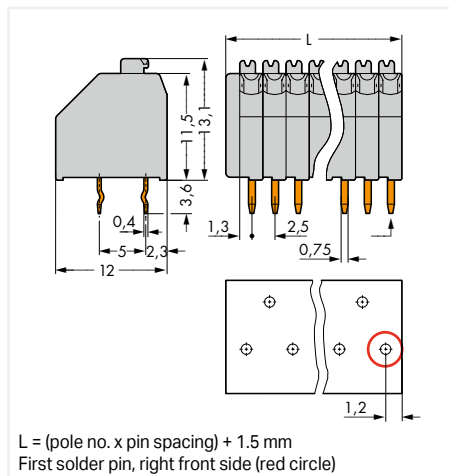
Pin spacing: 2.54 mm / 0.1 inch



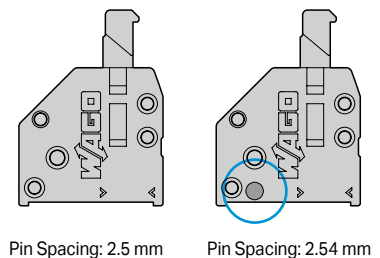
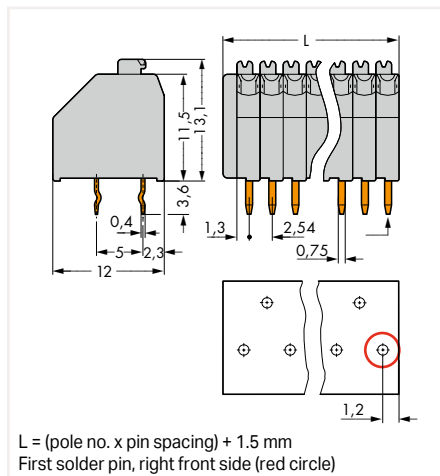
Pole No.	Item No.	Pack. unit
2	250-402	720 (80)
3	250-403	520 (130)
4	250-404	400 (100)
5	250-405	340 (85)
6	250-406	280 (70)
7	250-407	240 (60)
8	250-408	220 (55)
9	250-409	200 (50)
10	250-410	180 (45)
11	250-411	160 (40)
12	250-412	140 (35)
13	250-413	140 (35)
14	250-414	120 (30)
15	250-415	120 (30)
16	250-416	100 (25)
17	250-417	100 (25)
18	250-418	80 (20)
19	250-419	80 (20)
20	250-420	80 (20)
21	250-421	80 (20)
22	250-422	80 (20)
23	250-423	80 (20)
24	250-424	60 (15)

Pole No.	Item No.	Pack. unit
2	250-1402	720 (80)
3	250-1403	520 (130)
4	250-1404	400 (100)
5	250-1405	340 (85)
6	250-1406	280 (70)
7	250-1407	240 (60)
8	250-1408	200 (50)
9	250-1409	180 (45)
10	250-1410	160 (40)
11	250-1411	160 (40)
12	250-1412	140 (35)
13	250-1413	120 (30)
14	250-1414	120 (30)
15	250-1415	120 (30)
16	250-1416	100 (25)
17	250-1417	100 (25)
18	250-1418	100 (25)
19	250-1419	80 (20)
20	250-1420	80 (20)
21	250-1421	80 (20)
22	250-1422	80 (20)
23	250-1423	60 (15)
24	250-1424	60 (15)

Dimensions (in mm):



Dimensions (in mm):



A groove at the back of the terminal strip differentiates between the two pin spacings.

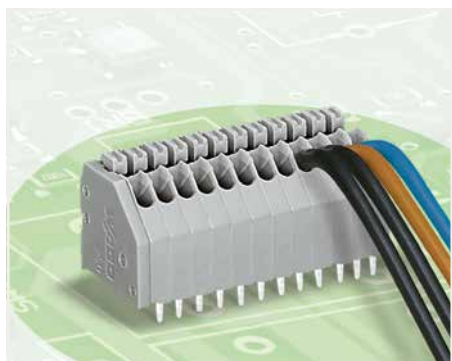
Available upon request (depending on quantity required):

- Other pole numbers
- Other colors: ● black, ● red, ● green, ● orange, ● blue, ○ light gray, ○ white, ● violet
- Mixed-color PCB connector strips
- Terminal strips with spacers
- Direct marking

## PCB Terminal Strip; with Push-Buttons; 1 In-Line Solder Pin/Pole; 0.5 mm<sup>2</sup>

Pin Spacing: 2.5 mm

250 Series



- Compact PCB terminal strips with push-buttons
- Version with in-line solder pins
- Push-in termination of solid conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring
- Custom color combinations
- Terminal strips also available with spacers upon request

### Electrical Data

Pin spacing	2.5 mm / 0.098 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	100 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Rated current	4 A	4 A	4 A

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	8.5 ... 9.5 mm / 0.32 ... 0.36 inch
Conductor entry angle to the PCB	45°
Conductor range	
Solid conductor	0.14 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG
Fine-stranded conductor	0.2 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG

### Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.75 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

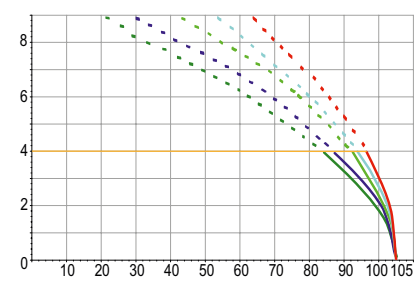
### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

### Current-Carrying Capacity Curve

Pin spacing: 2.5 mm / Conductor cross-section: 0.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1

Current in A



2, 4, 6, 12, 24-pole

Conductor rated current

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Strip; with Push-Buttons; 1 In-Line Solder Pin/Pole; 0.5 mm<sup>2</sup>

Pin Spacing: 2.5 mm

250 Series

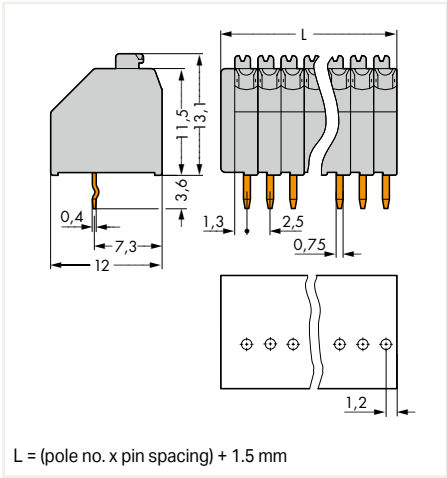
PUSH-IN CAGE CLAMP®

Pin spacing: 2.5 mm / 0.098 inch



Pole No.	Item No.	Pack. unit
2	250-302	720 (80)
3	250-303	520 (130)
4	250-304	400 (100)
5	250-305	340 (85)
6	250-306	280 (70)
7	250-307	240 (60)
8	250-308	220 (55)
9	250-309	200 (50)
10	250-310	180 (45)
11	250-311	160 (40)
12	250-312	140 (35)
13	250-313	140 (35)
14	250-314	120 (30)
15	250-315	120 (30)
16	250-316	100 (25)
17	250-317	100 (25)
18	250-318	80 (20)
19	250-319	80 (20)
20	250-320	80 (20)
21	250-321	80 (20)
22	250-322	80 (20)
23	250-323	80 (20)
24	250-324	60 (15)

Dimensions (in mm):



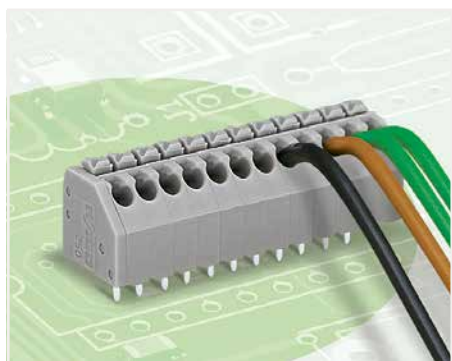
- Available upon request (depending on quantity required):
- Other pole numbers
  - Other colors: ● black, ● red, ● green, ● orange, ● blue, ○ light gray, ○ white, ● violet
  - Mixed-color PCB connector strips
  - Terminal strips with spacers
  - Direct marking



## PCB Terminal Strip; with Push-Buttons; 1.5 mm<sup>2</sup>

Pin Spacing: 3.5 mm

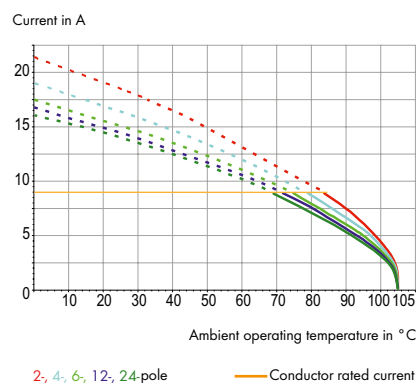
250 Series



- Compact PCB terminal strips with push-buttons
- Push-in termination of solid conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring
- Custom color combinations
- Terminal strips also available with spacers upon request

### Current-Carrying Capacity Curve

Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



Electrical Data	1 front solder pin/pole			1 solder pin/pole, staggered		
Pin spacing	3.5 mm / 0.138 inch			3.5 mm / 0.138 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	160 V	160 V	320 V	250 V	320 V	630 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	4 kV	4 kV	4 kV
Rated current	8 A	8 A	8 A	8 A	8 A	8 A
Approvals per	UL 1059			UL 1059		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V
Rated current	5 A	–	5 A	5 A	–	5 A
Approvals per	CSA			CSA		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V
Rated current	10 A	–	10 A	10 A	–	10 A

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	8.5 ... 9.5 mm / 0.32 ... 0.36 inch
Conductor entry angle to the PCB	45°
Conductor range	
Solid conductor	0.2 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG
Fine-stranded conductor	0.2 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

Solder Pin Data	
Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.75 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

Material Data	
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III / Pollution degree 2

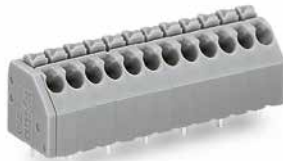
PCB Terminal Strip; with Push-Buttons; 1.5 mm<sup>2</sup>

Pin Spacing: 3.5 mm

250 Series

PUSH-IN CAGE CLAMP®

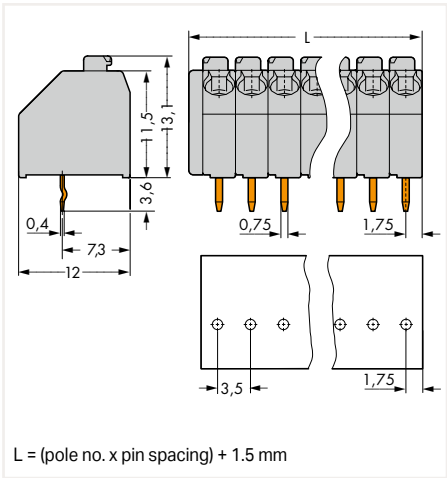
- 1 solder pin/pole, front in-line
- 1 solder pin/pole, staggered



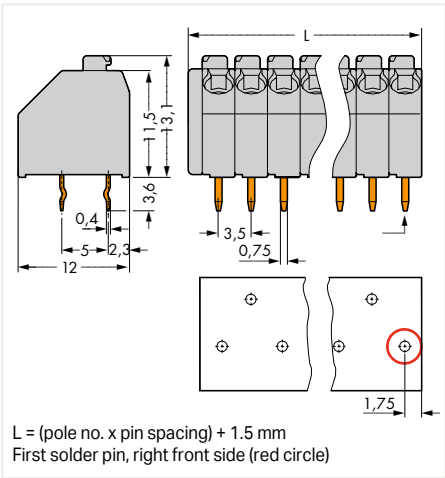
Pole No.	Item No.	Pack. unit
2	250-102	560 (140)
3	250-103	400 (100)
4	250-104	300 (75)
5	250-105	240 (60)
6	250-106	200 (50)
7	250-107	180 (45)
8	250-108	160 (40)
9	250-109	140 (35)
10	250-110	120 (30)
11	250-111	120 (30)
12	250-112	100 (25)
13	250-113	100 (25)
14	250-114	80 (20)
15	250-115	80 (20)
16	250-116	80 (20)
17	250-117	80 (20)
18	250-118	60 (15)
19	250-119	60 (15)
20	250-120	60 (15)
21	250-121	60 (15)
22	250-122	60 (15)
23	250-123	60 (15)
24	250-124	40 (10)

Pole No.	Item No.	Pack. unit
2	250-202	560 (140)
3	250-203	400 (100)
4	250-204	300 (75)
5	250-205	240 (60)
6	250-206	200 (50)
7	250-207	180 (45)
8	250-208	160 (40)
9	250-209	140 (35)
10	250-210	120 (30)
11	250-211	120 (30)
12	250-212	100 (25)
13	250-213	100 (25)
14	250-214	80 (20)
15	250-215	80 (20)
16	250-216	80 (20)
17	250-217	80 (20)
18	250-218	60 (15)
19	250-219	60 (15)
20	250-220	60 (15)
21	250-221	60 (15)
22	250-222	60 (15)
23	250-223	60 (15)
24	250-224	40 (10)

Dimensions (in mm):



Dimensions (in mm):

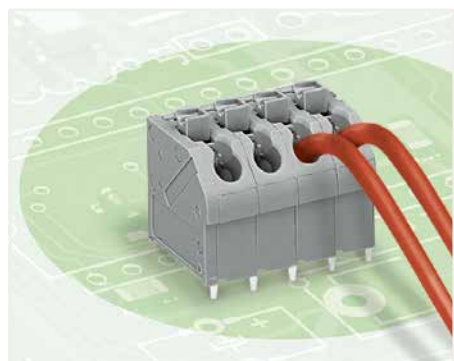


- Available upon request (depending on quantity required):
- Other pole numbers
  - Other colors: ● black, ● red, ● green, ● orange, ● blue, ○ light gray, ● brown, ● light green, ● yellow, ● violet, ○ white, ● pink
  - Mixed-color PCB connector strips
  - Terminal strips with spacers
  - Direct marking

## PCB Terminal Strip; with Push-Buttons; 1 In-Line Solder Pin/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 5 mm; 7.5 mm

250 Series

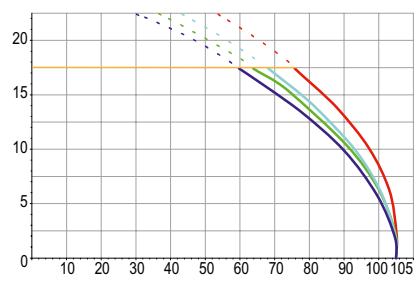


- Compact PCB terminal strips with push-buttons
- Push-in termination of solid conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "s"  
Based on: EN 60512-5-2 / Reduction factor: 1

Current in A



2-, 4-, 6-, 12-pole

— Conductor rated current

### Electrical Data

Pin spacing	5 mm / 0.197 inch			7.5 mm / 0.295 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	320 V	320 V	630 V	500 V	630 V	1000 V
Rated surge voltage	4 kV	4 kV	4 kV	6 kV	6 kV	6 kV
Rated current	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A

Approvals per	UL 1059			UL 1059		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V
Rated current	2 A	–	2 A	2 A	–	2 A

Approvals per	CSA			CSA		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V
Rated current	10 A	–	10 A	10 A	–	10 A

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	45°
Conductor range	
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 14 AWG
Fine-stranded conductor	0.75 ... 1.5 mm <sup>2</sup> / 18 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.5 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 1 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	4 mm
Solder pin dimensions	0.5 x 0.75 mm
Drilled hole diameter	1.2 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

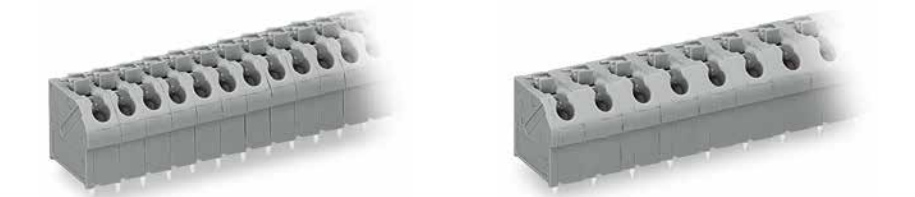
\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Strip; with Push-Buttons; 1 In-Line Solder Pin/Pole; 1.5 mm<sup>2</sup>  
Pin Spacing: 5 mm; 7.5 mm  
250 Series

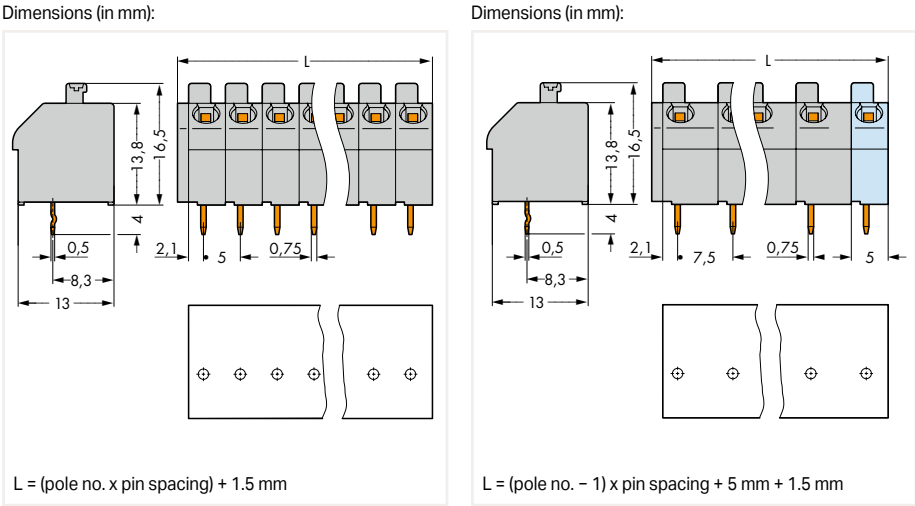
PUSH-IN CAGE CLAMP®

5 mm (0.197 inch) pin spacing

7.5 mm (0.295 inch) pin spacing



Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
2	250-502	400 (100)	2	250-602	340 (85)
3	250-503	280 (70)	3	250-603	200 (50)
4	250-504	220 (55)	4	250-604	160 (40)
5	250-505	180 (45)	5	250-605	120 (30)
6	250-506	140 (35)	6	250-606	100 (25)
7	250-507	120 (30)	7	250-607	80 (20)
8	250-508	100 (25)	8	250-608	80 (20)
9	250-509	100 (25)	9	250-609	60 (15)
10	250-510	80 (20)	10	250-610	60 (15)
11	250-511	80 (20)	11	250-611	40 (10)
12	250-512	60 (15)	12	250-612	40 (10)
13	250-513	60 (15)			
14	250-514	60 (15)			
15	250-515	60 (15)			
16	250-516	40 (10)			



Available upon request (depending on quantity required):

- Other pole numbers
- Other colors: red, orange, blue, light gray, brown, light green, yellow, white
- Mixed-color PCB connector strips
- Direct marking

## THR Terminal Strip; with Push-Buttons; 0.5 mm<sup>2</sup>

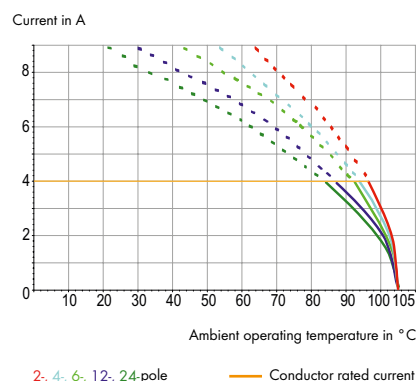
Pin Spacing: 2.5 mm

250 Series



- Cost-effective integration of high-temperature resistant THR terminal strips into SMT reflow soldering processes
- Versions with suction pads are available in tape-and-reel packaging for automated assembly
- Push-in termination of solid and ferruled conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring

**Current-Carrying Capacity Curve**  
Pin spacing: 2.5 mm / Conductor cross-section: 0.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



### Electrical Data

Pin spacing	2.5 mm / 0.098 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	160 V	160 V	250 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Rated current	4 A	4 A	4 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	5 A	–	5 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	2 A	–	2 A

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	8.5 ... 9.5 mm / 0.32 ... 0.36 inch
Conductor entry angle to the PCB	45°
Conductor range	
Solid conductor	0.14 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG
Fine-stranded conductor	0.2 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG

### Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.75 mm
Drilled hole diameter	1 <sup>+0.1</sup> mm

### Material Data

Material group	III a
Insulating material	Polyamide 46 (PA 46)
Flammability class per UL94	V2
Limit temperature range	–60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

THR Terminal Strip; with Push-Buttons; 0.5 mm<sup>2</sup>

Pin Spacing: 2.5 mm

250 Series

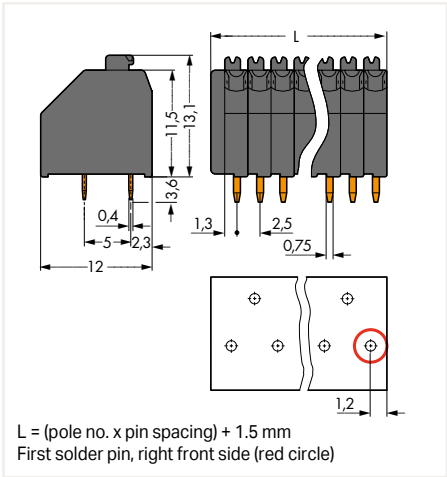
PUSH-IN CAGE CLAMP®

1 solder pin/pole, staggered



Pole No.	Item No.	Pack. unit
2	250-402/350-604	720 (180)
3	250-403/350-604	520 (130)
4	250-404/350-604	400 (100)
5	250-405/350-604	340 (85)
6	250-406/350-604	280 (70)
7	250-407/350-604	240 (60)
8	250-408/350-604	220 (55)

Dimensions (in mm):



Available upon request (depending on quantity required):

- Other pole numbers
- Direct marking



## THR Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole; 1.5 mm<sup>2</sup>

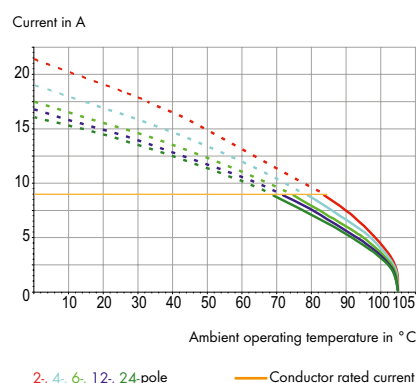
Pin Spacing: 3.5 mm

250 Series



- Cost-effective integration of high-temperature resistant THR terminal strips into SMT reflow soldering processes
- Versions with suction pads are available in tape-and-reel packaging for automated assembly
- Push-in termination of solid and ferruled conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring

**Current-Carrying Capacity Curve**  
Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



Electrical Data		1 front solder pin/pole		
Pin spacing		3.5 mm / 0.138 inch		
Ratings per		IEC/EN 60664-1		
Overvoltage category		III	III	II
Pollution degree		3	2	2
Rated voltage		200 V	320 V	320 V
Rated surge voltage		4 kV	4 kV	4 kV
Rated current		8 A	8 A	8 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	5 A	–	5 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	10 A	–	10 A

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	8.5 ... 9.5 mm / 0.32 ... 0.36 inch
Conductor entry angle to the PCB	45°
Conductor range	
Solid conductor	0.2 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG
Fine-stranded conductor	0.2 ... 0.5 mm <sup>2</sup> / 24 ... 20 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

Solder Pin Data	
Solder pin length	2.4 mm
Solder pin dimensions	0.4 x 0.75 mm
Drilled hole diameter	1 <sup>+0.1</sup> mm

Material Data	
Material group	III a
Insulating material	Polyamide 46 (PA 46)
Flammability class per UL94	V2
Limit temperature range	–60 ... +105 °C
Contact material	Copper alloy
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III / Pollution degree 2

THR Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole;  
1.5 mm<sup>2</sup>; Pin Spacing: 3.5 mm  
250 Series

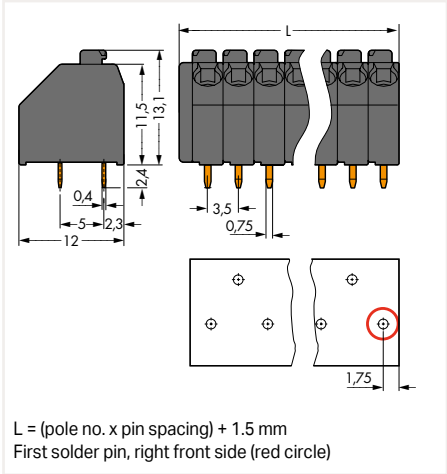
PUSH-IN CAGE CLAMP®

With additional suction pad in tape-and-reel packaging  
per IEC 60286-3; 330 mm reel diameter; 160 units/reel



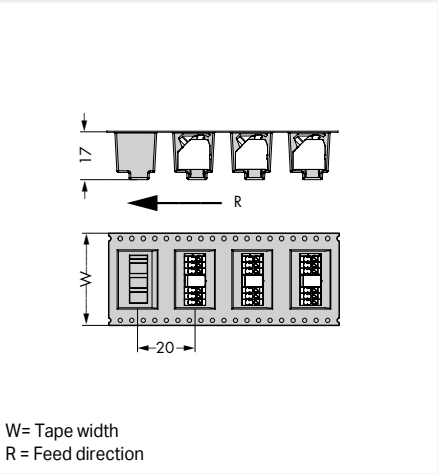
Pole No.	Item No.	Pack. unit
2	250-202/353-604	560 (140)
3	250-203/353-604	400 (100)
4	250-204/353-604	300 (75)
5	250-205/353-604	240 (60)
6	250-206/353-604	200 (50)
7	250-207/353-604	180 (45)
8	250-208/353-604	160 (40)

Dimensions (in mm):



Pole No.	Item No.	W (mm)
2	250-202/353-604/997-404	24
3	250-203/353-604/997-404	24
4	250-204/353-604/997-405	32
5	250-205/353-604/997-405	32
6	250-206/353-604/997-406	44
7	250-207/353-604/997-406	44
8	250-208/353-604/997-406	44

Dimensions (in mm):



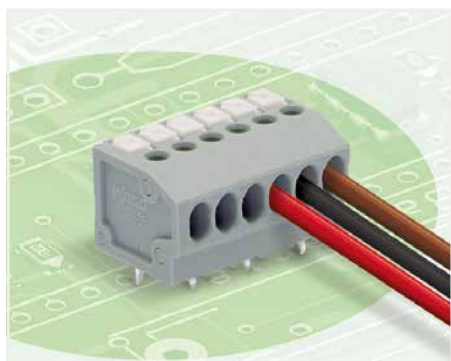
Available upon request (depending on quantity required):

- Other pole numbers
- Direct marking

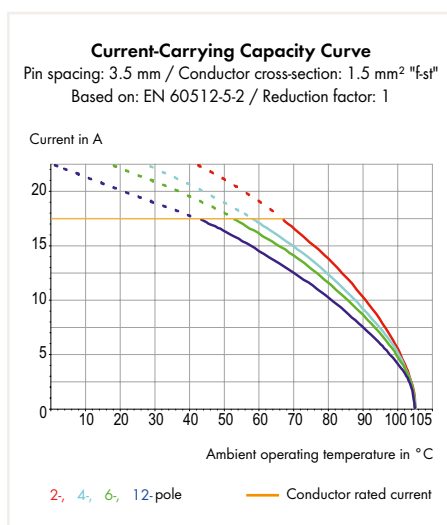
## PCB Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 3.5 mm

805 Series



- PCB terminal strips with push-buttons and Push-in CAGE CLAMP® connection
- Push-in termination of solid and ferruled, fine-stranded conductors
- Flush-mount push-buttons that close with minimal force for convenient termination/removal of fine-stranded conductors
- Convenient, tool-free operation
- Versions with/without test slots and spacers
- Versions available with custom internal commoning (factory assembly), e.g., commoning ground conductor



Electrical Data			
Pin spacing	3.5 mm / 0.138 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	17.5 A	17.5 A	17.5 A
Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	150	300 V
Rated current	10 A	10 A	10 A

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

Solder Pin Data	
Solder pin length	3.2 mm
Solder pin dimensions	0.5 x 0.75 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

Material Data	
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole;  
1.5 mm²; Pin Spacing: 3.5 mm  
805 Series

Slots for 2 mm Ø test plug

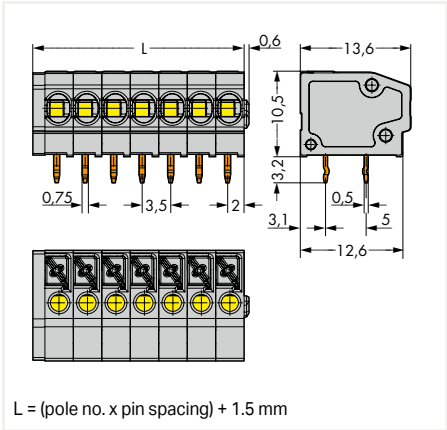


2

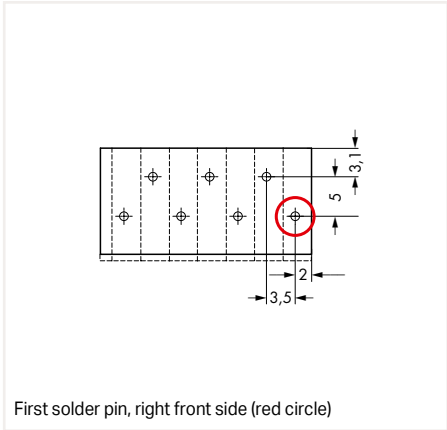
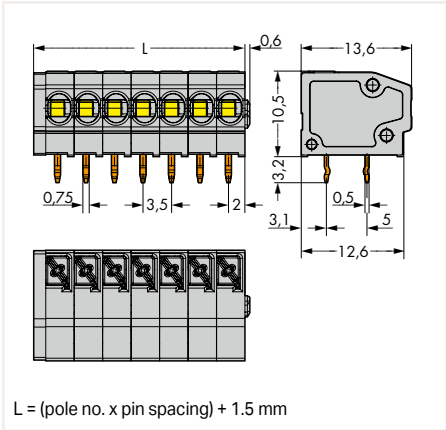
Pole No.	Item No.	Pack. unit
2	805-102	580 (145)
3	805-103	420 (105)
4	805-104	320 (80)
5	805-105	260 (65)
6	805-106	220 (55)
7	805-107	180 (45)
8	805-108	160 (40)
9	805-109	140 (35)
10	805-110	120 (30)
11	805-111	100 (25)
12	805-112	100 (25)
13	805-113	100 (25)
14	805-114	100 (25)
15	805-115	80 (20)
16	805-116	80 (20)
17	805-117	80 (20)
18	805-118	60 (15)
19	805-119	60 (15)
20	805-120	60 (15)
21	805-121	60 (15)
22	805-122	60 (15)
23	805-123	60 (15)
24	805-124	40 (10)

Pole No.	Item No.	Pack. unit
2	805-302	580 (145)
3	805-303	420 (105)
4	805-304	320 (80)
5	805-305	260 (65)
6	805-306	220 (55)
7	805-307	180 (45)
8	805-308	160 (40)
9	805-309	140 (35)
10	805-310	120 (30)
11	805-311	100 (25)
12	805-312	100 (25)
13	805-313	100 (25)
14	805-314	100 (25)
15	805-315	80 (20)
16	805-316	80 (20)
17	805-317	80 (20)
18	805-318	60 (15)
19	805-319	60 (15)
20	805-320	60 (15)
21	805-321	60 (15)
22	805-322	60 (15)
23	805-323	60 (15)
24	805-324	40 (10)

Dimensions (in mm):



Dimensions (in mm):



Available upon request (depending on quantity required):

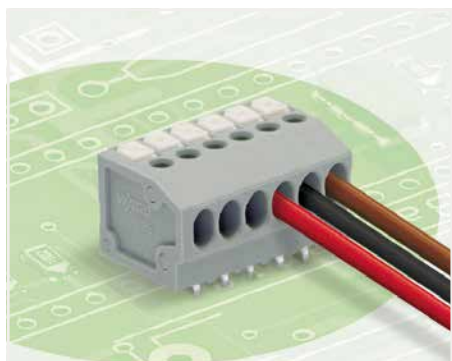
- Other pole numbers
- Other colors: blue, orange
- Mixed-color PCB connector strips
- Direct marking

## PCB Terminal Strip; with Push-Buttons; 1 In-Line Solder Pin/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 3.5 mm

805 Series

2



- PCB terminal strips with push-buttons and Push-in CAGE CLAMP® connection
- Version with in-line solder pins
- Push-in termination of solid and ferruled, fine-stranded conductors
- Flush-mount push-buttons that close with minimal force for convenient termination/removal of fine-stranded conductors
- Convenient, tool-free operation
- Versions with/without test slots and spacers
- Versions available with custom internal commoning (factory assembly), e.g., commoning ground conductor

### Electrical Data

Pin spacing	3.5 mm / 0.138 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	160 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Rated current	17.5 A	17.5 A	17.5 A

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

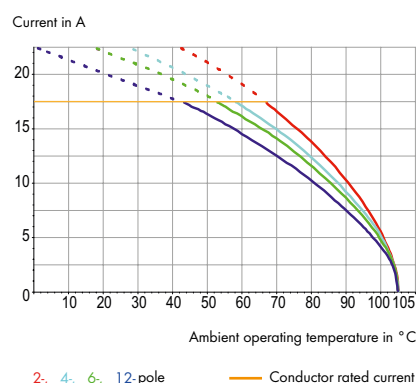
### Solder Pin Data

Solder pin length	3.2 mm
Solder pin dimensions	0.5 x 0.75 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	-60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

**Current-Carrying Capacity Curve**  
Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2



PCB Terminal Strip; with Push-Buttons; 1 In-Line Solder Pin/Pole; 1.5 mm<sup>2</sup>  
Pin Spacing: 3.5 mm  
805 Series

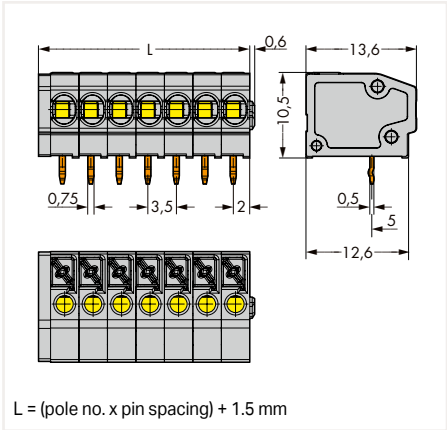
PUSH-IN CAGE CLAMP®

Slots for 2 mm Ø test plug

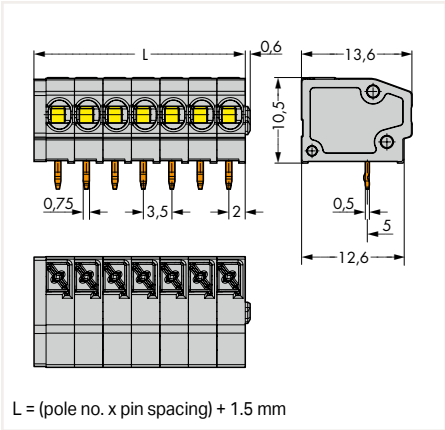


Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
2	805-152	600 (150)	2	805-352	600 (150)
3	805-153	420 (105)	3	805-353	420 (105)
4	805-154	300 (75)	4	805-354	300 (75)
5	805-155	260 (65)	5	805-355	260 (65)
6	805-156	220 (55)	6	805-356	220 (55)
7	805-157	180 (45)	7	805-357	180 (45)
8	805-158	160 (40)	8	805-358	160 (40)
9	805-159	140 (35)	9	805-359	140 (35)
10	805-160	120 (30)	10	805-360	120 (30)
11	805-161	100 (25)	11	805-361	100 (25)
12	805-162	100 (25)	12	805-362	100 (25)
13	805-163	100 (25)	13	805-363	100 (25)
14	805-164	100 (25)	14	805-364	100 (25)
15	805-165	80 (20)	15	805-365	80 (20)
16	805-166	80 (20)	16	805-366	80 (20)
17	805-167	80 (20)	17	805-367	80 (20)
18	805-168	60 (15)	18	805-368	60 (15)
19	805-169	60 (15)	19	805-369	60 (15)
20	805-170	60 (15)	20	805-370	60 (15)
21	805-171	60 (15)	21	805-371	60 (15)
22	805-172	60 (15)	22	805-372	60 (15)
23	805-173	60 (15)	23	805-373	60 (15)
24	805-174	40 (10)	24	805-374	40 (10)

Dimensions (in mm):



Dimensions (in mm):



Available upon request (depending on quantity required):

- Other pole numbers
- Other colors: blue, orange
- Mixed-color PCB connector strips
- Direct marking

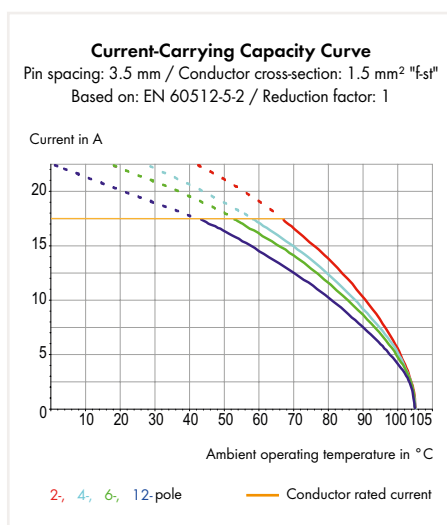
## THR Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 3.5 mm

805 Series



- THR PCB terminal strips with push-buttons and Push-in CAGE CLAMP® connection
- Push-in termination of solid and ferruled, fine-stranded conductors
- Flush-mount push-buttons that close with minimal force for convenient termination/removal of fine-stranded conductors
- Convenient, tool-free operation



Electrical Data			
Pin spacing	3.5 mm / 0.138 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	200 V	320 V	320 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	17.5 A	17.5 A	17.5 A

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

Solder Pin Data	
Solder pin length	2.2 mm
Solder pin dimensions	0.5 x 0.75 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

Material Data	
Material group	III a
Insulating material	Polyamide 46 (PA 46)
Flammability class per UL94	V2
Limit temperature range	-60 ... +115 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

THR Terminal Strip; with Push-Buttons; 1 Staggered Solder Pin/Pole;  
1.5 mm<sup>2</sup>; Pin Spacing: 3.5 mm  
805 Series

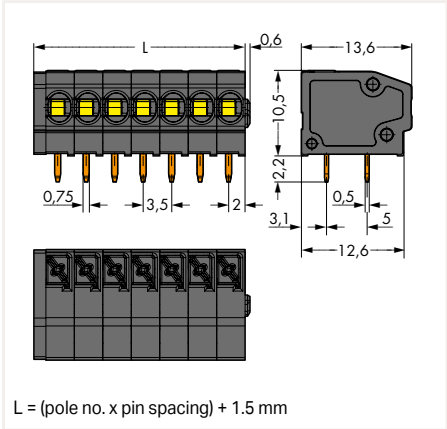
PUSH-IN CAGE CLAMP®

With additional suction pad in tape-and-reel packaging  
per IEC 60286-3; 330 mm reel diameter; 160 units/reel



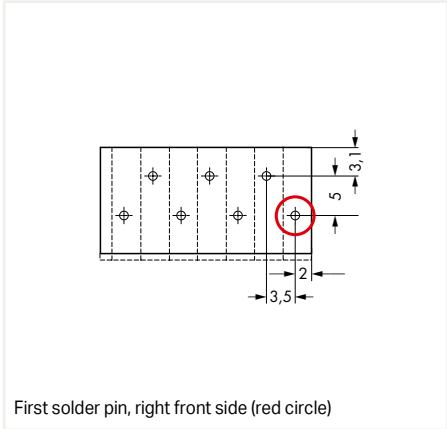
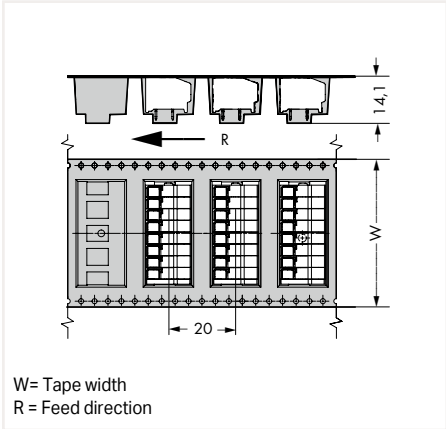
Pole No.	Item No.	Pack. Unit
2	805-302/200-604	600 (150)
3	805-303/200-604	420 (105)
4	805-304/200-604	300 (75)
5	805-305/200-604	260 (65)
6	805-306/200-604	220 (55)
7	805-307/200-604	180 (45)
8	805-308/200-604	160 (40)

Dimensions (in mm):



Pole No.	Item No.	W (mm)
2	805-302/200-604/997-404	24
3	805-303/200-604/997-405	32
4	805-304/200-604/997-405	32
5	805-305/200-604/997-405	32
6	805-306/200-604/997-406	44
7	805-307/200-604/997-406	44
8	805-308/200-604/997-406	44

Dimensions (in mm):

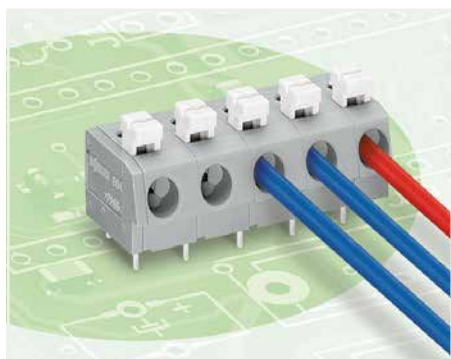


# PCB Terminal Strip; with Push-Buttons; 2 Staggered Solder Pins/Pole; 2.5 mm<sup>2</sup>

Pin Spacing: 5 mm; 7.5 mm

804 Series

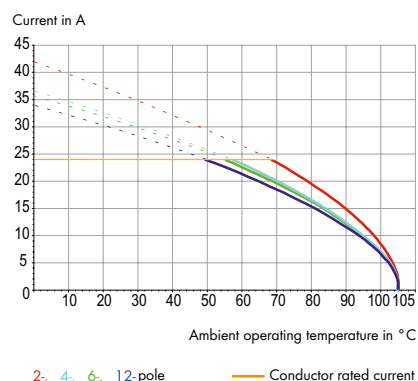
2



- PCB terminal strips with push-buttons and Push-in CAGE CLAMP® connection
- Push-in termination of solid and ferruled, fine-stranded conductors
- A large conductor entry accommodates conductors with a cross-section up to 12 AWG with an insulation diameter up to 4.2 mm
- Terminal strips with spacers to increase pin spacing
- Versions available with custom internal commoning (factory assembly), e.g., commoning ground conductor

## Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 2.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



## Electrical Data

Pin spacing	5 mm / 0.197 inch			7.5 mm / 0.295 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	250 V	320 V	630 V	320 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV	4 kV	4 kV	4 kV
Rated current	24 A	24 A	24 A	24 A	24 A	24 A

Approvals per	UL 1059			UL 1059		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V
Rated current	10 A	–	10 A	10 A	–	10 A

Approvals per	CSA			CSA		
Use group	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V
Rated current	10 A	–	10 A	10 A	–	10 A

## Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	10 ... 11 mm / 0.39 ... 0.43 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.25 ... 2.5 mm <sup>2</sup> / 20 ... 12 AWG
Fine-stranded conductor	0.25 ... 2.5 mm <sup>2</sup> / 20 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup>

## Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.8 x 0.6 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

## Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

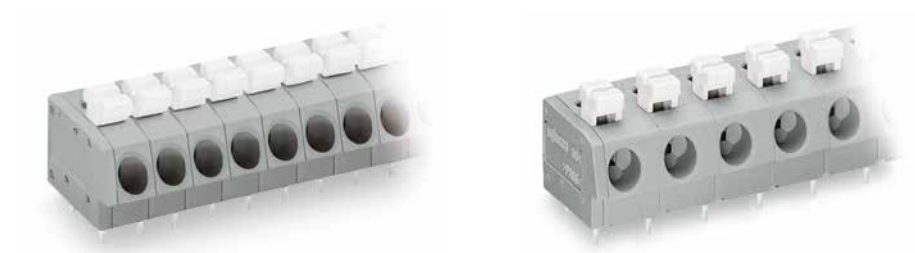
\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Strip; with Push-Buttons; 2 Staggered Solder Pins/Pole;  
2.5 mm<sup>2</sup>; Pin Spacing: 5 mm; 7.5 mm  
804 Series

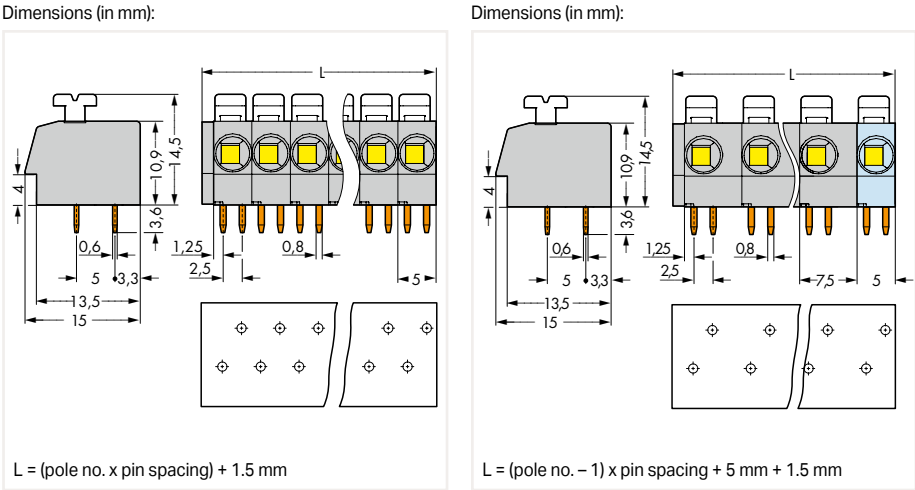
PUSH-IN CAGE CLAMP®

Pin spacing: 2.5 mm / 0.098 inch

Pin spacing: 2.54 mm / 0.1 inch



Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
2	804-102	420 (105)	2	804-302	340 (85)
3	804-103	300 (75)	3	804-303	220 (55)
4	804-104	220 (55)	4	804-304	160 (40)
5	804-105	180 (45)	5	804-305	120 (30)
6	804-106	140 (35)	6	804-306	100 (25)
7	804-107	120 (30)	7	804-307	80 (20)
8	804-108	100 (25)	8	804-308	80 (20)
9	804-109	100 (25)	9	804-309	60 (15)
10	804-110	80 (20)	10	804-310	60 (15)
11	804-111	80 (20)	11	804-311	60 (15)
12	804-112	80 (20)	12	804-312	40 (10)
13	804-113	60 (15)			
14	804-114	60 (15)			
15	804-115	60 (15)			
16	804-116	60 (15)			



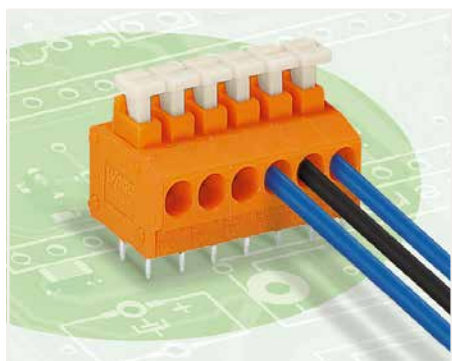
Available upon request (depending on quantity required):

- Other pole numbers
- Other colors: ● red, ● orange, ● light green, ● pink, ● blue (● blue for Ex i applications)
- Mixed-color PCB connector strips
- 10 mm pin spacing version with spacers
- Direct marking



## Modular PCB Terminal Block and PCB Terminal Strip; with Push-Buttons; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>; Pin Spacing: 3.81 mm

### 235 Series

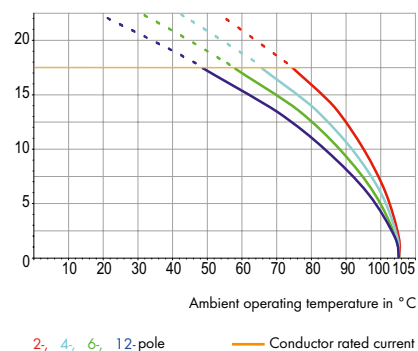


- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons

#### Current-Carrying Capacity Curve

Pin spacing: 3.81 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "s"  
Based on: EN 60512-5-2 / Reduction factor: 1

Current in A



Electrical Data				
Pin spacing	3.81 mm / 0.15 inch			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	200 V	320 V	500 V	
Rated surge voltage	4 kV	4 kV	4 kV	
Rated current	17.5 A	17.5 A	17.5 A	

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	10 A	–	10 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	–	–
Rated current	10 A	–	–

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor	0.75 ... 1.5 mm <sup>2</sup> / 18 ... 16 AWG (I max. 4 A)
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

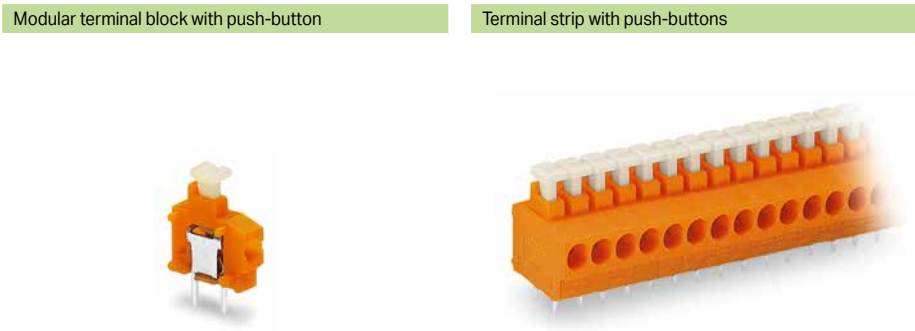
Solder Pin Data	
Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.8 mm
Drilled hole diameter	1 <sup>+0.1</sup> mm

Material Data	
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

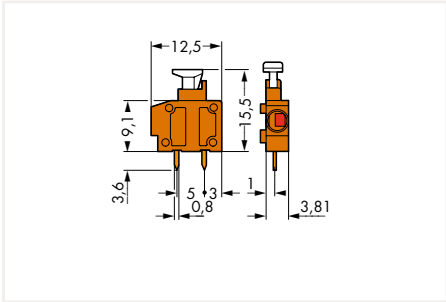
Modular PCB Terminal Block and PCB Terminal Strip; with Push-Buttons;  
2 Solder Pins/Pole; 1.5 mm<sup>2</sup>; Pin Spacing: 3.81 mm  
235 Series

PUSH-IN CAGE CLAMP®

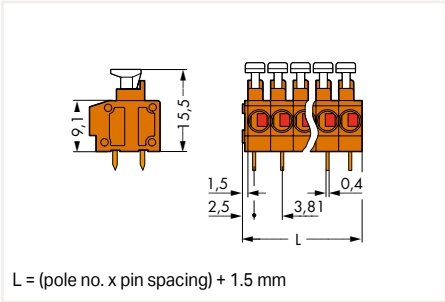


Color	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
orange	235-101	800 (100)	2	235-102	520 (130)
red	235-770	800 (100)	3	235-103	360 (90)
gray	235-771	800 (100)	4	235-104	280 (70)
dark gray	235-772	800 (100)	5	235-105	220 (55)
blue	235-774	800 (100)	6	235-106	180 (45)
white	235-775	800 (100)	7	235-107	160 (40)
yellow	235-776	800 (100)	8	235-108	140 (35)
light green	235-777	800 (100)	9	235-109	120 (30)
black	235-778	800 (100)	10	235-110	120 (30)












Dimensions (in mm):




Dimensions (in mm):



Accessories, for all products on this page

		
End plates for modular terminal blocks; snap-on type; 1 mm thick		
Color	Item No.	Pack. Unit
 orange	235-600	100
 red	235-800	100
 gray	235-100	100
 dark gray	235-200	100
 blue	235-400	100
 white	235-850	100
 yellow	235-550	100
 light green	235-700	100
 black	235-500	100

Spacer, doubles 3.81 mm (0.15 inch) pin spacing		
Color	Item No.	Pack. Unit
 orange	235-316	100

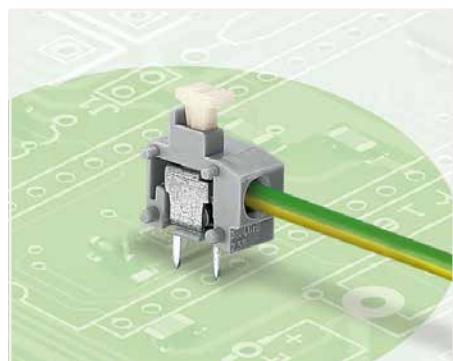
Available upon request (depending on quantity required):

- Other pole numbers
- Other colors for terminal strips: red, gray, dark gray, blue, white, yellow, light green, black
- Mixed-color PCB connector strips
- Direct marking

## Modular PCB Terminal Block; with Push-Buttons; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 5/5.08 mm, 7.5/7.62 mm, 10/10.16 mm

235 Series

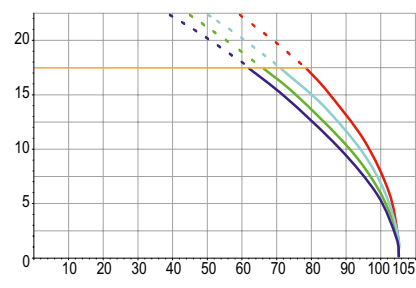


- Modular PCB terminal blocks with push-buttons for custom terminal strip assemblies
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Set to metric or inch pin spacing by compressing PCB terminal strips or pulling them apart
- For two-conductor versions, visit [www.wago.com](http://www.wago.com).

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "s"  
Based on: EN 60512-5-2 / Reduction factor: 1

Current in A



2-, 4-, 6-, 12-pole

— Conductor rated current

### Electrical Data

Pin spacing	5/5.08 mm / 0.2 inch			7.5/7.62 mm / 0.3 inch			10/10.16 mm / 0.4 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2	3	2	2
Rated voltage	250 V	320 V	630 V	400 V	630 V	1000 V	630 V	1000 V	1000 V
Rated surge voltage	4 kV	4 kV	4 kV	6 kV	6 kV	6 kV	8 kV	8 kV	8 kV
Rated current	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A	17.5 A

Approvals per	UL 1059			UL 1059			UL 1059		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V	300 V	–	300 V
Rated current	10 A	–	10 A	10 A	–	10 A	10 A	–	10 A

Approvals per	CSA			CSA			CSA		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	–	300 V	–	–	300 V	–	–
Rated current	15 A	–	–	15 A	–	–	15 A	–	–

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 1.5 mm <sup>2</sup> / 20 ... 14 AWG
Fine-stranded conductor	0.25 ... 0.5 mm <sup>2</sup> (I max. 2 A)
Fine-stranded conductor	0.75 ... 1.5 mm <sup>2</sup> (I max. 6 A)
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.8 mm
Drilled hole diameter	1 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

**PUSH-IN CAGE CLAMP®**

# Modular PCB Terminal Block; with Push-Buttons; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>; Pin Spacing: 5/5.08 mm, 7.5/7.62 mm, 10/10.16 mm 235 Series

Pin spacing: 5/5.08 mm / 0.2 inch

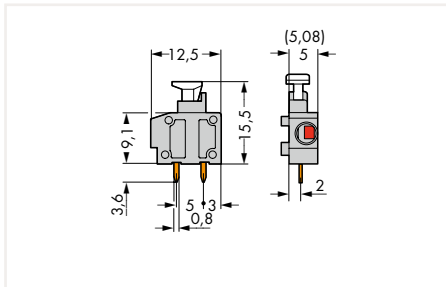
Pin spacing: 7.5/7.62 mm / 0.3 inch

Pin spacing: 10/10.16 mm / 0.4 inch



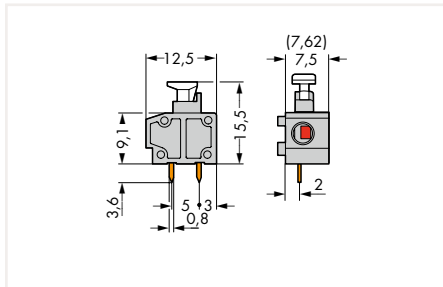
Color	Item No.	Pack. Unit
gray	235-401/331-000	800 (100)
red	235-740/331-000	800 (100)
yellow	235-741/331-000	800 (100)
dark gray	235-742/331-000	800 (100)
light gray	235-743/331-000	800 (100)
blue	235-744/331-000	800 (100)
white	235-745/331-000	800 (100)
orange	235-746/331-000	800 (100)
light green	235-747/331-000	800 (100)
black	235-748/331-000	800 (100)
violet	235-749/331-000	800 (100)

Dimensions (in mm):



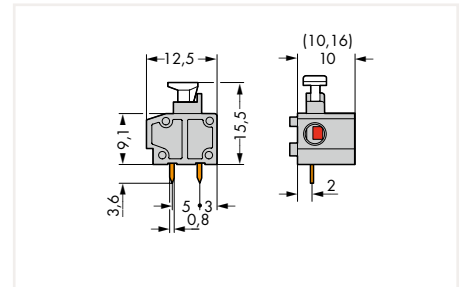
Color	Item No.	Pack. Unit
gray	235-501/331-000	600 (100)
dark gray	235-752/331-000	600 (100)
light gray	235-753/331-000	600 (100)
blue*	235-754/331-000	600 (100)
orange	235-756/331-000	600 (100)
light green	235-757/331-000	600 (100)
black	235-758/331-000	600 (100)

Dimensions (in mm):



Color	Item No.	Pack. Unit
gray	235-801/331-000	400 (100)
dark gray	235-762/331-000	400 (100)
light gray	235-763/331-000	400 (100)
blue*	235-764/331-000	400 (100)
orange	235-766/331-000	400 (100)
light green	235-767/331-000	400 (100)
black	235-768/331-000	400 (100)

Dimensions (in mm):



\*Suitable for Ex i applications

Accessories, for all products on this page



Spacer, doubles 5/5.08 mm (0.2 inch) pin spacing

Color	Item No.	Pack. Unit
gray	235-701	100

End plates for modular terminal blocks;  
snap-on type; 1 mm thick

Color	Item No.	Pack. Unit
gray	235-100	100
dark gray	235-200	100
light gray	235-300	100
blue	235-400	100
black	235-500	100
yellow	235-550	100
orange	235-600	100
violet	235-650	100
light green	235-700	100
red	235-800	100
white	235-850	100

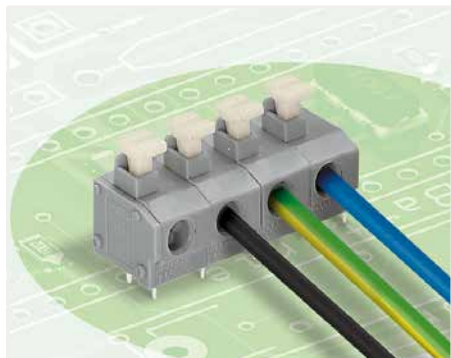
Available upon request (depending on quantity required):

- Other colors

## PCB Terminal Strip; with Push-Buttons; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 5/5.08 mm

235 Series

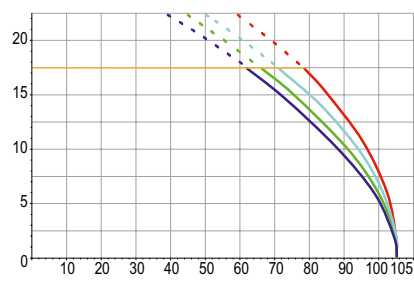


- PCB terminal strips with push-buttons
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Set to metric or inch pin spacing by compressing PCB terminal strips or pulling them apart

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "s"  
Based on: EN 60512-5-2 / Reduction factor: 1

Current in A



2-, 4-, 6-, 12-pole

— Conductor rated current

### Electrical Data

Pin spacing	5/5.08 mm / 0.2 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	17.5 A	17.5 A	17.5 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	10 A	–	10 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	–	–
Rated current	15 A	–	–

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 1.5 mm <sup>2</sup> / 20 ... 14 AWG
Fine-stranded conductor	0.25 ... 0.5 mm <sup>2</sup> (I max. 2 A)
Fine-stranded conductor	0.75 ... 1.5 mm <sup>2</sup> (I max. 6 A)
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.8 mm
Drilled hole diameter	1 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

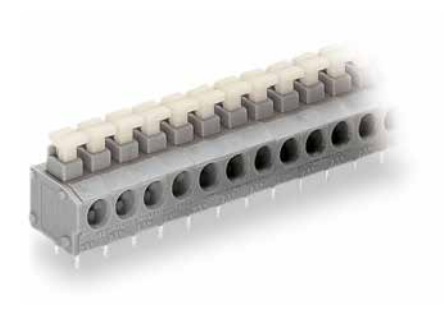
\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Strip; with Push-Buttons; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 5/5.08 mm

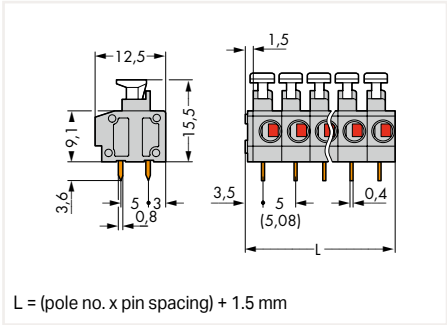
235 Series

PUSH-IN CAGE CLAMP®



Pole No.	Item No.	Pack. Unit
2	235-402/331-000	420 (105)
3	235-403/331-000	280 (70)
4	235-404/331-000	220 (55)
5	235-405/331-000	180 (45)
6	235-406/331-000	140 (35)
7	235-407/331-000	120 (30)
8	235-408/331-000	100 (25)
9	235-409/331-000	100 (25)
10	235-410/331-000	80 (20)
12	235-412/331-000	60 (15)

Dimensions (in mm):



Available upon request (depending on quantity required):

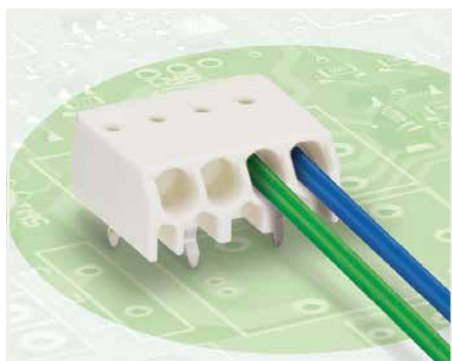
- Other pole numbers
- Terminal strips with 7.5/7.62 mm and 10/10.16 mm pin spacing
- Other colors: ● red, ○ light gray, ● dark gray, ● blue, ○ white, ● yellow, ● light green, ● black, ● orange, ● violet
- Mixed-color PCB connector strips
- Direct marking



## PCB Terminal Block; with Disconnecting Slot; 1 Staggered Solder Pin/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 3.5 mm

744 Series



- PCB terminal blocks with PUSH WIRE® connection
- Push-in termination of solid conductors – low insertion forces
- Just 6.6 mm tall
- Conductor removal via disconnection tool or by twist and pull

Electrical Data			
Pin spacing	3.5 mm / 0.138 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	2 A	2 A	2 A
Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	2 A	–	2 A

Connection Data	
Connection technology	PUSH WIRE®
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG

Solder Pin Data	
Solder pin length	3.5 mm
Solder pin dimensions	0.35 x 0.9 mm
Drilled hole diameter	1.1 <sup>-0.1</sup> mm

Material Data	
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Contact Material	Copper alloy
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Block; with Disconnecting Slot; 1 Staggered Solder Pin/Pole; 1.5 mm<sup>2</sup> PUSH WIRE®

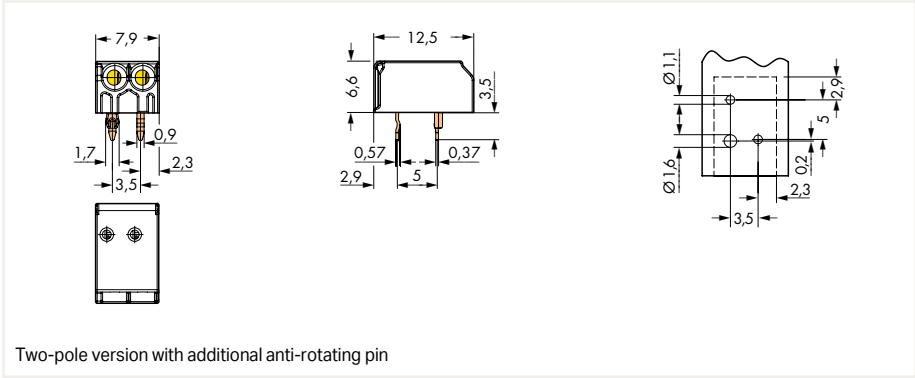
Pin Spacing: 3.5 mm

744 Series

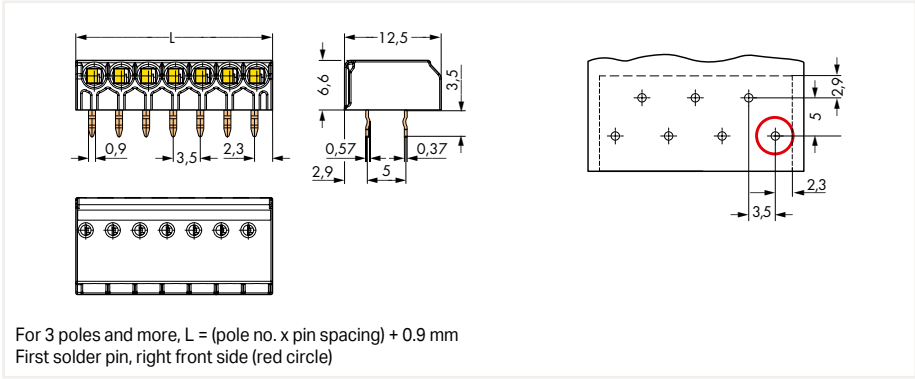


Pole No.	Item No.	Pack. Unit
2	744-392	1500
3	744-303	1000
4	744-304	800
6	744-306	500
7	744-307	300
8	744-308	300
10	744-310	200

Dimensions (in mm):



Inserting a conductor via push-in termination.



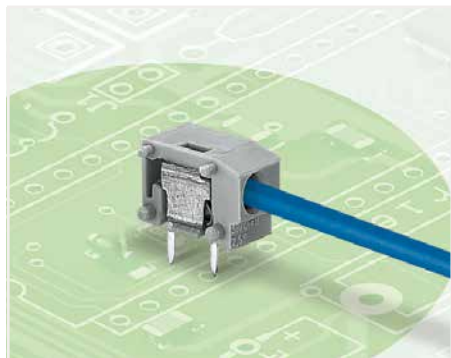
Removing a conductor via 1.0 mm Ø 206-841 Disconnection Tool.

## Modular PCB Terminal Block; 2 Solder Pins/Pole; 2.5 mm<sup>2</sup>

Pin Spacing: 5/5.08 mm, 7.5/7.62 mm, 10/10.16 mm

235 Series

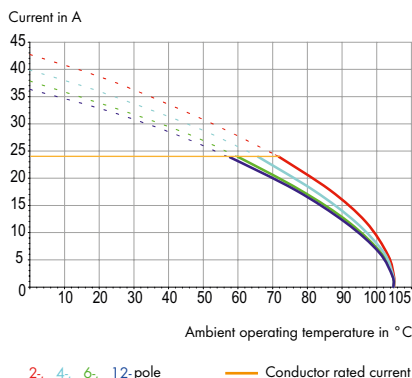
2



- Low-profile modular PCB terminal blocks with PUSH WIRE® connection for custom terminal strip assemblies
- Push-in termination of solid conductors
- Double solder pins for high mechanical stability
- Conductor removal via (2.5 x 0.4) mm screwdriver
- Set to metric or inch pin spacing by compressing PCB terminal strips or pulling them apart
- For two-conductor versions, visit [www.wago.com](http://www.wago.com).

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 2.5 mm<sup>2</sup> "s"  
Based on: EN 60512-5-2 / Reduction factor: 1



### Electrical Data

Pin spacing	5/5.08 mm / 0.2 inch			7.5/7.62 mm / 0.3 inch			10/10.16 mm / 0.4 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2	3	2	2
Rated voltage	250 V	320 V	630 V	400 V	630 V	1000 V	630 V	1000 V	1000 V
Rated surge voltage	4 kV	4 kV	4 kV	6 kV	6 kV	6 kV	8 kV	8 kV	8 kV
Rated current	24 A	24 A	24 A	24 A	24 A	24 A	24 A	24 A	24 A

Approvals per	UL 1059			UL 1059			UL 1059		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	–	300 V	300 V	–	300 V
Rated current	10 A	–	10 A	10 A	–	10 A	10 A	–	10 A

Approvals per	CSA			CSA			CSA		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	–	300 V	–	–	300 V	–	–
Rated current	15 A	–	–	15 A	–	–	15 A	–	–

### Connection Data

Connection technology	PUSH WIRE®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.5 ... 2.5 mm <sup>2</sup> / 20 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.8 mm
Drilled hole diameter	1 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

# Modular PCB Terminal Block; 2 Solder Pins/Pole; 2.5 mm<sup>2</sup> Pin Spacing: 5/5.08 mm, 7.5/7.62 mm, 10/10.16 mm 235 Series

Pin spacing: 5/5.08 mm / 0.2 inch

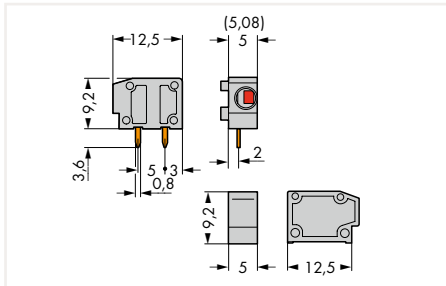
Pin spacing: 7.5/7.62 mm / 0.3 inch

Pin spacing: 10/10.16 mm / 0.4 inch



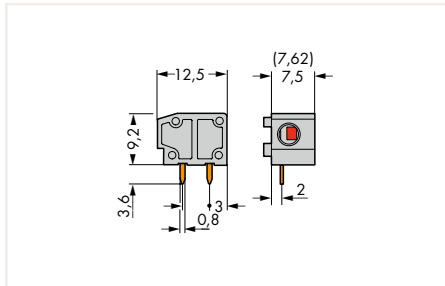
Color	Item No.	Pack. Unit
○ gray	235-401	800 (100)
● dark gray	235-742	800 (100)
○ light gray	235-743	800 (100)
● blue	235-744	800 (100)
● orange	235-746	800 (100)
● light green	235-747	800 (100)

Dimensions (in mm):



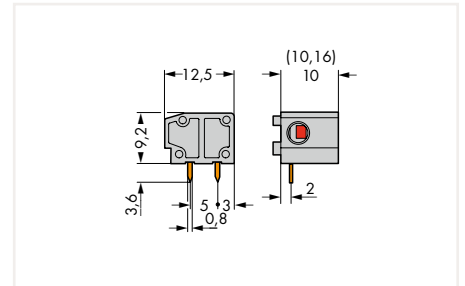
Color	Item No.	Pack. Unit
○ gray	235-501	600 (100)
● dark gray	235-752	600 (100)
○ light gray	235-753	600 (100)
● blue*	235-754	600 (100)
● orange	235-756	600 (100)
● light green	235-757	600 (100)

Dimensions (in mm):



Color	Item No.	Pack. Unit
○ gray	235-801	400 (100)
● dark gray	235-762	400 (100)
○ light gray	235-763	400 (100)
● blue*	235-764	400 (100)
● orange	235-766	400 (100)
● light green	235-767	400 (100)

Dimensions (in mm):



\*Suitable for Ex i applications

## Accessories, for all products on this page



### Spacer, doubles 5/5.08 mm (0.2 inch) pin spacing

Color	Item No.	Pack. Unit
○ gray	235-701	100

### End plates for modular terminal blocks; snap-on type; 1 mm thick

Color	Item No.	Pack. Unit
○ gray	235-100	100
● dark gray	235-200	100
○ light gray	235-300	100
● blue	235-400	100
● black	235-500	100
● yellow	235-550	100
● orange	235-600	100
● violet	235-650	100
● light green	235-700	100
● red	235-800	100
○ white	235-850	100

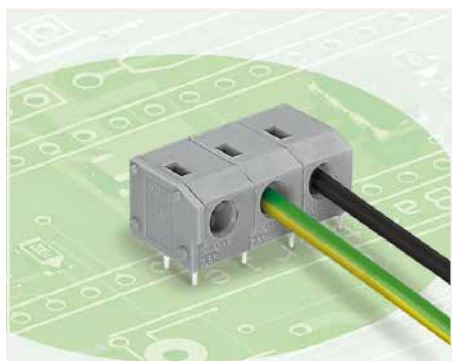
Available upon request (depending on quantity required):

- Other colors

## PCB Terminal Strip; 2 Solder Pins/Pole; 2.5 mm<sup>2</sup>

Pin Spacing: 5/5.08 mm

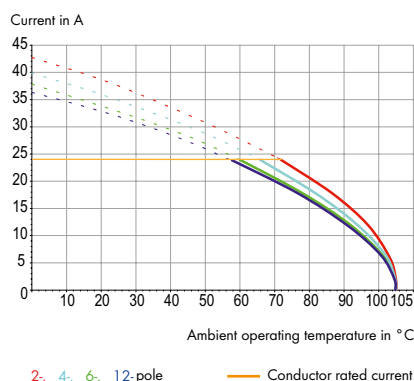
235 Series



- Low-profile PCB terminal strips with PUSH WIRE® connection and screwdriver actuation
- Push-in termination of solid conductors
- Double solder pins for high mechanical stability
- Set to metric or inch pin spacing by compressing PCB terminal strips or pulling them apart

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 2.5 mm<sup>2</sup> "s"  
Based on: EN 60512-5-2 / Reduction factor: 1



### Electrical Data

Pin spacing	5/5.08 mm / 0.2 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	24 A	24 A	24 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	10 A	–	10 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	–	–
Rated current	15 A	–	–

### Connection Data

Connection technology	PUSH WIRE®
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.5 ... 2.5 mm <sup>2</sup> / 20 ... 14 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.8 mm
Drilled hole diameter	1 <sup>+0.1</sup> mm

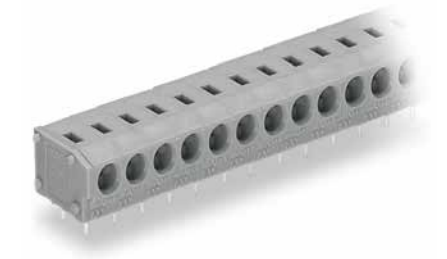
### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

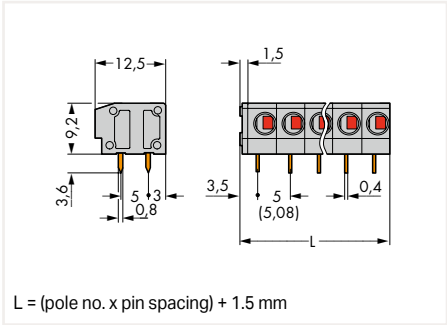
PCB Terminal Strip; 2 Solder Pins/Pole; 2.5 mm<sup>2</sup>  
Pin Spacing: 5/5.08 mm  
235 Series

PUSH WIRE®



Pole No.	Item No.	Pack. Unit
2	235-402	420 (105)
3	235-403	280 (70)
4	235-404	220 (55)
5	235-405	180 (45)
6	235-406	140 (35)
7	235-407	120 (30)
8	235-408	100 (25)
9	235-409	100 (25)
10	235-410	80 (20)
12	235-412	60 (15)

Dimensions (in mm):



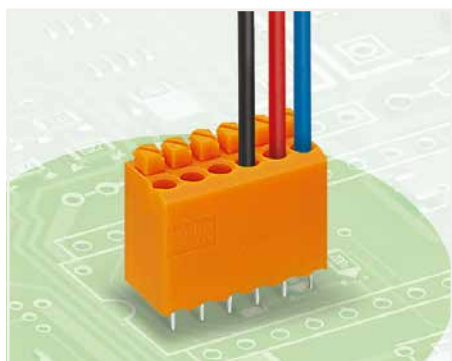
- Available upon request (depending on quantity required):
- Other pole numbers
  - Terminal strips with 7.5/7.62 mm and 10/10.16 mm pin spacing
  - Other colors: ● blue, ○ light gray, ● dark gray, ● light green, ● orange
  - Mixed-color PCB connector strips
  - Direct marking



## Compact PCB Terminal Block with Push-Buttons; High Version; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 3.81 mm

735 Series



- PCB Terminal Blocks with Push-Buttons and PUSH WIRE® Connection
- Top-of-unit, push-button actuation and conductor termination save space on the PCB
- Push-in termination of solid conductors
- Terminal blocks can be arranged side-by-side without loss of poles.

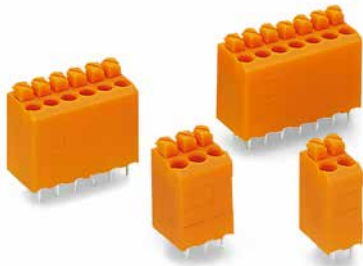
Electrical Data				
Pin spacing	3.81 mm / 0.15 inch			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	250 V	320 V	630 V	
Rated surge voltage	4 kV	4 kV	4 kV	
Rated current	10 A	10 A	10 A	
Approvals per	UL 1059			
Use group	B	C	D	
Rated voltage	300 V	–	300 V	
Rated current	10 A	–	10 A	
Approvals per	CSA			
Use group	B	C	D	
Rated voltage	300 V	–	300 V	
Rated current	10 A	–	10 A	
Connection Data				
Connection technology	PUSH WIRE®			
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch			
Conductor entry angle to the PCB	90°			
Conductor range				
Solid conductor	0.5 ... 1.5 mm² / 20 ... 16 AWG			
Fine-stranded conductor; with insulated ferrule	0.5 ... 1 mm²			
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 1 mm²			
Solder Pin Data				
Solder pin length	3.5 mm			
Solder pin dimensions	0.4 x 0.9 mm			
Drilled hole diameter	1 <sup>+0.1</sup> mm			
Material Data				
Material group	I			
Insulating material	Polyamide 66 (PA 66)			
Flammability class per UL94	V0			
Limit temperature range	–60 ... +105 °C			
Clamping spring material	Chrome nickel spring steel (CrNi)			
Contact Material	Electrolytic copper (E <sub>Cu</sub> )			
Contact plating	Tin-plated			

\*(III / 2) ≙ Overvoltage category III / Pollution degree 2

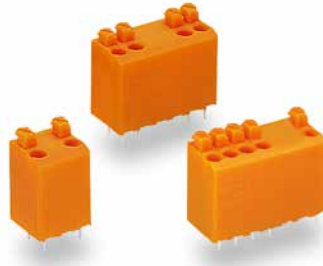
# Compact PCB Terminal Block with Push-Buttons; High Version; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>; Pin Spacing: 3.81 mm 735 Series

**PUSH WIRE®**

Compact PCB terminal block with push-buttons



Compact PCB terminal block with push-buttons and spacer

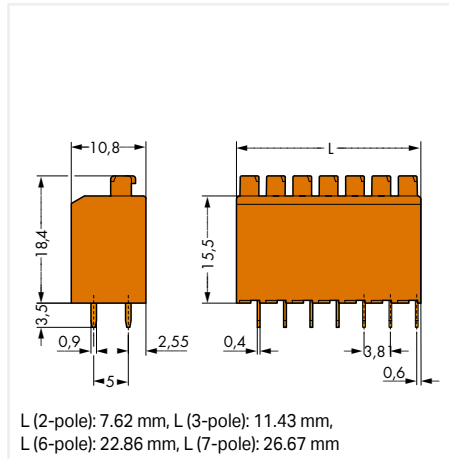


Pole No.	Item No.	Pack. Unit
2	735-122	660 (165)
3	735-123	440 (110)
6	735-126	220 (55)
7	735-127	180 (45)

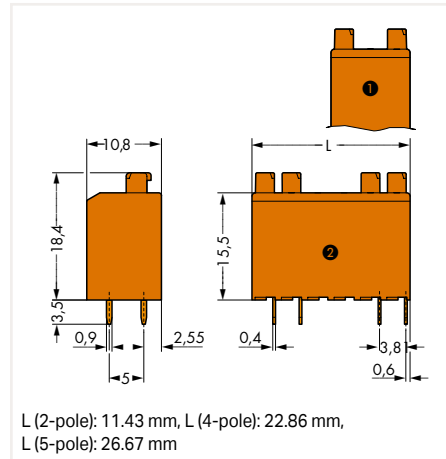
Pole No.	Item No.	Pack. Unit
2	735-123/001-000 *	440 (110)
4	735-126/001-000	220 (55)
5	735-127/001-000	180 (45)

\*Technical data, visit [www.wago.com](http://www.wago.com)

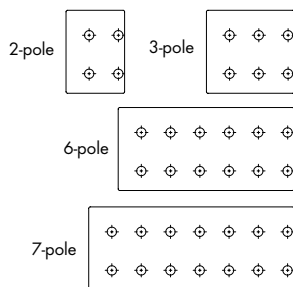
Dimensions (in mm):



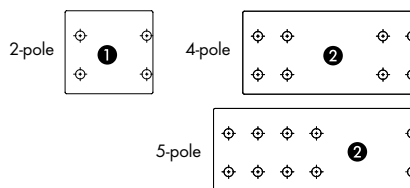
Dimensions (in mm):



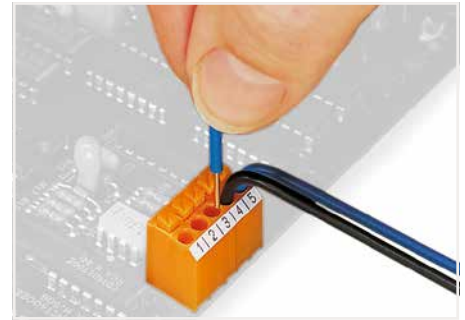
Hole patterns



Hole patterns



① Spacer: 1 x pin spacing  
② Spacer: 2 x pin spacing



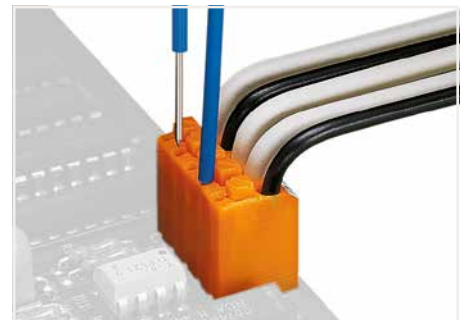
Push-in termination of solid conductors



Removing a conductor via push-button.



Terminal blocks can be arranged side-by-side without loss of poles.



Testing via 1 mm Ø test pin.

Available upon request (depending on quantity required):

- Direct marking

## Compact PCB Terminal Block with Push-Buttons; Low Version; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>

Pin Spacing: 5 mm

735 Series



- PCB Terminal Blocks with Push-Buttons and PUSH WIRE® Connection
- Top-of-unit, push-button actuation and conductor termination save space on the PCB
- Push-in termination of solid conductors
- Terminal blocks can be arranged side-by-side without loss of poles.

Electrical Data				
Pin spacing	5 mm / 0.197 inch			
Ratings per	IEC/EN 60664-1			
Overvoltage category	III	III	II	
Pollution degree	3	2	2	
Rated voltage	320 V	320 V	630 V	
Rated surge voltage	4 kV	4 kV	4 kV	
Rated current	10 A	10 A	10 A	
Approvals per	UL 1059			
Use group	B	C	D	
Rated voltage	300 V	–	300 V	
Rated current	10 A	–	10 A	
Approvals per	CSA			
Use group	B	C	D	
Rated voltage	300 V	–	300 V	
Rated current	10 A	–	10 A	
Connection Data				
Connection technology	PUSH WIRE®			
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch			
Conductor entry angle to the PCB	90°			
Conductor range				
Solid conductor	0.5 ... 1.5 mm² / 20 ... 16 AWG			
Fine-stranded conductor; with insulated ferrule	0.5 ... 1 mm²			
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 1 mm²			
Solder Pin Data				
Solder pin length	3.5 mm			
Solder pin dimensions	0.4 x 0.9 mm			
Drilled hole diameter	1 <sup>+0.1</sup> mm			
Material Data				
Material group	I			
Insulating material	Polyamide 66 (PA 66)			
Flammability class per UL94	V0			
Limit temperature range	–60 ... +105 °C			
Clamping spring material	Chrome nickel spring steel (CrNi)			
Contact Material	Electrolytic copper (E <sub>Cu</sub> )			
Contact plating	Tin-plated			

\*(III / 2) ≙ Overvoltage category III / Pollution degree 2

# Compact PCB Terminal Block with Push-Buttons; Low Version; 2 Solder Pins/Pole; 1.5 mm<sup>2</sup>; Pin Spacing: 5 mm 735 Series

**PUSH WIRE®**

Compact PCB terminal block with push-buttons



Compact terminal block with push-buttons and spacer for 1 x pin spacing



Compact terminal block with push-buttons and spacer for 2 x pin spacing



2

Pole No.	Item No.	Pack. Unit
2	735-302	500 (125)
3	735-303	320 (80)
4	735-304	240 (60)
6	735-306	160 (40)
7	735-307	140 (35)

Pole No.	Item No.	Pack. Unit
2	735-303/001-000 *	320 (80)
5	735-306/003-000	160 (40)
6	735-307/001-000	140 (35)

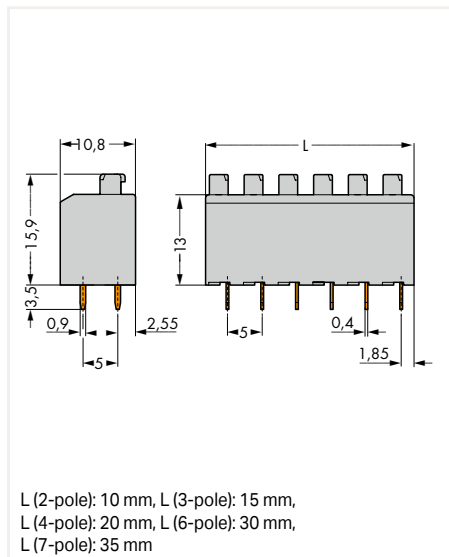
Pole No.	Item No.	Pack. Unit
4	735-306/001-000	160 (40)

\*Technical data, visit [www.wago.com](http://www.wago.com)

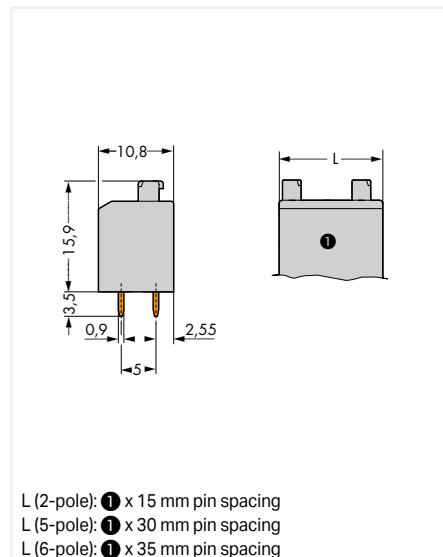
Compact terminal block with push-buttons and spacer for 3 x pin spacing

Pole No.	Item No.	Pack. Unit
4	735-307/002-000	140 (35)

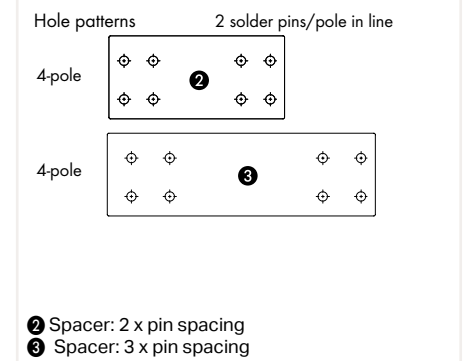
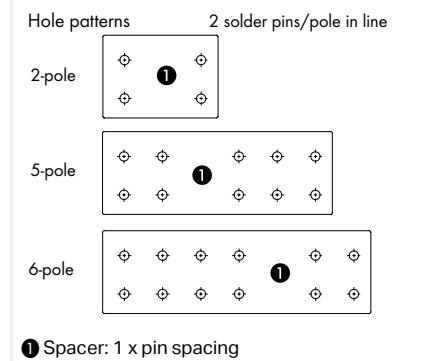
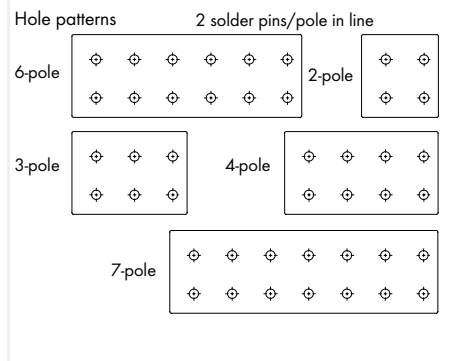
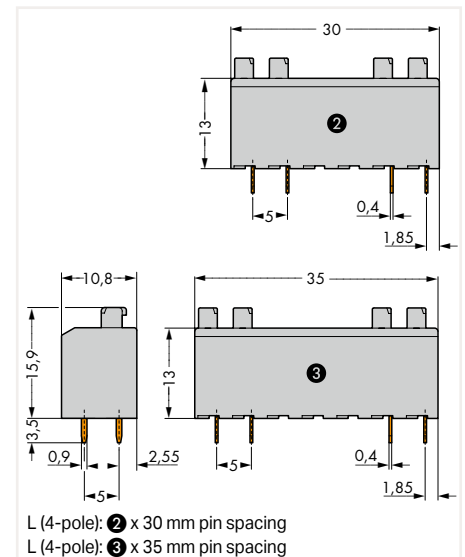
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



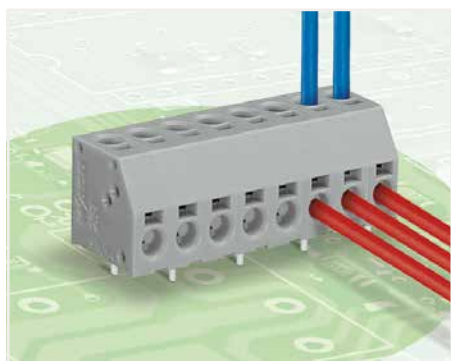
Available upon request (depending on quantity required):

- Direct marking

## 2-Conductor PCB Terminal Strip; 1.5 mm<sup>2</sup>

Pin Spacing: 5 mm

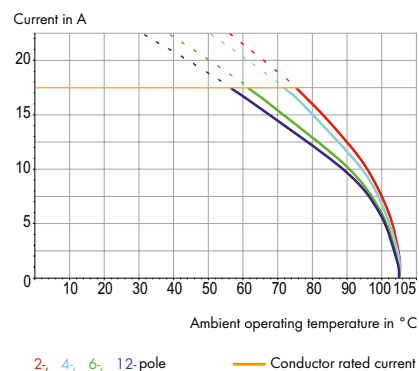
253 Series



- PCB terminal strips with PUSH WIRE® connection and screwdriver actuation
- Double-conductor connection provides top-entry (vertical) and/or side-entry (horizontal) wiring
- Push-in termination of solid conductors
- Double entries for power supply and potential distribution

### Current-Carrying Capacity Curve Conductor – Solder Pin

Pin spacing: 5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "e"  
Based on: EN 60512-5-2 / Reduction factor: 1



Electrical Data			
Pin spacing	5 mm / 0.197 inch		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	320 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	17.5 A	17.5 A	17.5 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	8 A	–	8 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	–	300 V
Rated current	8 A	–	8 A

Connection Data	
Connection technology	PUSH WIRE®
Strip length	8.5 ... 9.5 mm / 0.32 ... 0.36 inch
Conductor entry angle (1) to the PCB	0°
Conductor entry angle (2) to the PCB	90°
Conductor range	
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG

Solder Pin Data	
Solder pin length	3.6 mm
Solder pin dimensions	0.5 x 0.8 mm
Drilled hole diameter	1.1 <sup>+0.1</sup> mm

Material Data	
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

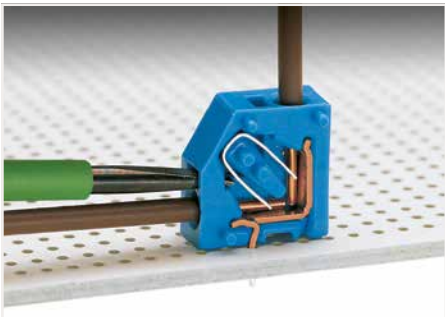
2-Conductor PCB Terminal Strip; 1.5 mm²  
Pin Spacing: 5 mm  
253 Series

1 solder pin/pole, staggered



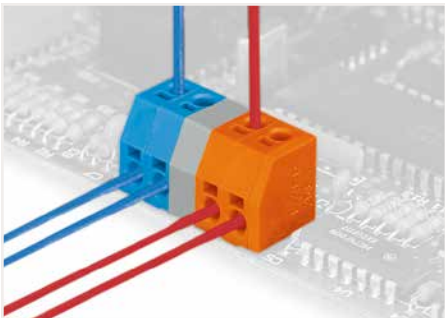
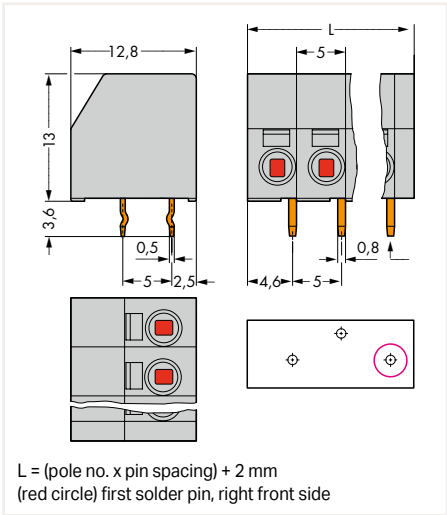
Inserting a conductor via push-in termination.

Pole No.	Item No.	Pack. Unit
2	253-102	400 (100)
3	253-103	280 (70)
4	253-104	220 (55)
5	253-105	160 (40)
6	253-106	140 (35)
7	253-107	120 (30)
8	253-108	100 (25)
9	253-109	100 (25)
10	253-110	80 (20)
11	253-111	80 (20)
12	253-112	60 (15)
13	253-113	60 (15)
14	253-114	60 (15)
15	253-115	60 (15)
16	253-116	40 (10)



Removing a conductor via 2.5 mm screwdriver.

Dimensions (in mm):



Mixed-color terminal strips (with or without spacer) are available upon request.

Available upon request (depending on quantity required):

- Other pole numbers
- Other colors: ● red, ○ light gray, ● blue, ○ white, ● yellow, ● light green, ● black, ● orange, ● violet
- Mixed-color PCB connector strips
- Direct marking



## PCB Terminal Block with Levers; 2 Solder Pins/Pole; 4 mm<sup>2</sup>

Pin Spacing: 5 mm; 7.5 mm; 11.5 mm

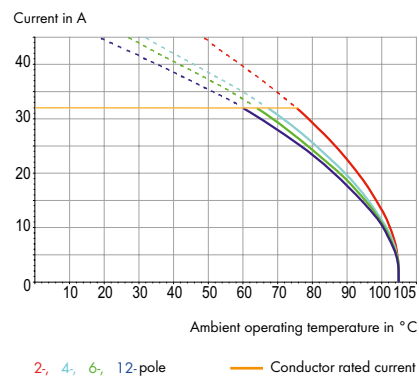
2604 Series



- PCB terminal block with levers and Push-in CAGE CLAMP®
- Push-in termination of solid and ferruled conductors
- Intuitive and tool-free operation
- Several clamping units can be held open simultaneously – convenient for terminating multi-core cables
- Testing can be performed both parallel and perpendicular to conductor entry

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 4 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



### Electrical Data

Pin spacing	5 mm / 0.197 inch			7.5 mm / 0.295 inch			11.5 mm / 0.453 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2	3	2	2
Rated voltage	320 V	400 V	630 V	630 V	630 V	1000 V	1000 V	1000 V	1000 V
Rated surge voltage	4 kV	4 kV	4 kV	6 kV	6 kV	6 kV	8 kV	8 kV	8 kV
Rated current	32 A	32 A	32 A	32 A	32 A	32 A	32 A	32 A	32 A

Approvals per	UL 1059			UL 1059			UL 1059		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	300 V	600 V	600 V	600 V	–
Rated current	20 A	–	10 A	20 A	20 A	5 A	20 A	20 A	–

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 11 mm / 0.35 ... 0.43 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with twin ferrule	0.25 ... 1.5 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	4 mm
Solder pin dimensions	0.8 x 1 mm
Drilled hole diameter	1.3 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Block with Levers; 2 Solder Pins/Pole; 4 mm<sup>2</sup>  
Pin Spacing: 5 mm; 7.5 mm; 11.5 mm  
2604 Series

PUSH-IN CAGE CLAMP®

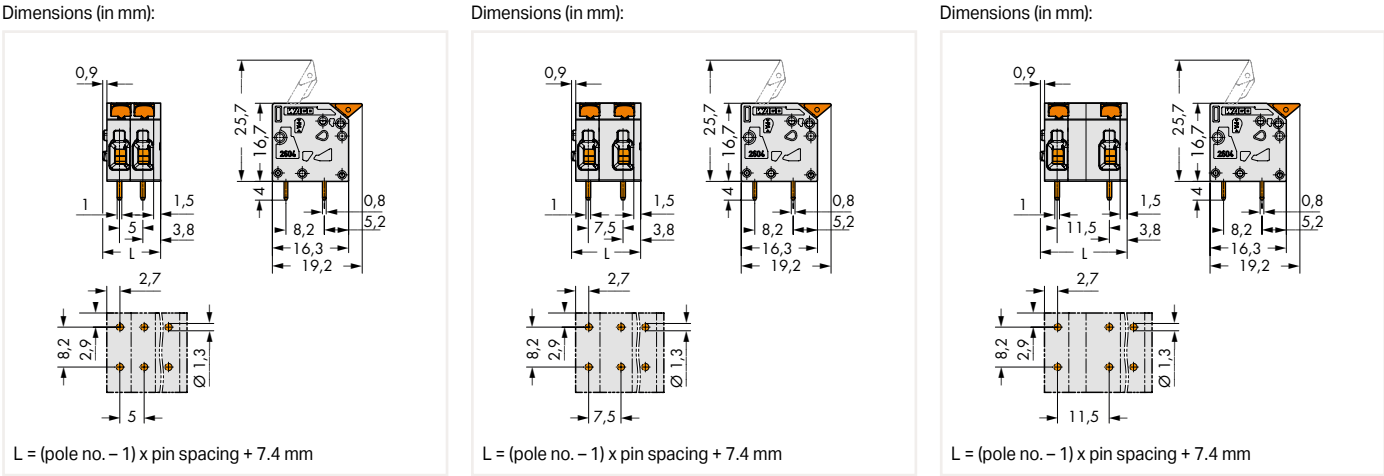
Pin spacing: 5 mm / 0.197 inch

Pin spacing: 7.5 mm / 0.295 inch

Pin spacing: 11.5 mm / 0.453 inch



Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
1	2604-1101	300	2	2604-1302	150	2	2604-1502	120
2	2604-1102	200	3	2604-1303	100	3	2604-1503	70
3	2604-1103	130	4	2604-1304	70	4	2604-1504	50
4	2604-1104	100	5	2604-1305	60	5	2604-1505	40
5	2604-1105	80	6	2604-1306	45	6	2604-1506	30
6	2604-1106	60	7	2604-1307	40	7	2604-1507	25
7	2604-1107	60	8	2604-1308	35	8	2604-1508	25
8	2604-1108	50	9	2604-1309	30	9	2604-1509	25
9	2604-1109	40	10	2604-1310	25	10	2604-1510	20
10	2604-1110	40	11	2604-1311	25	11	2604-1511	20
11	2604-1111	30	12	2604-1312	25	12	2604-1512	15
12	2604-1112	30						



Available upon request (depending on quantity required):

- Other pole numbers
- Other colors
- Direct marking

## PCB Terminal Block; with Levers; 2 Solder Pins/Pole; 4 mm<sup>2</sup>

Pin Spacing: 5 mm; 7.5 mm; 11.5 mm

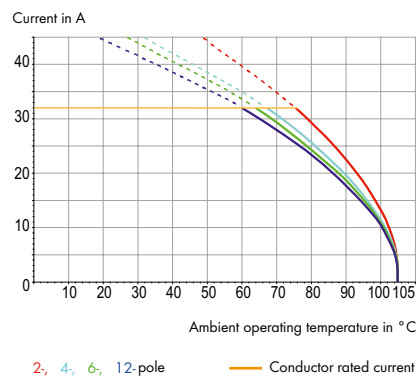
2604 Series



- PCB terminal block with levers and Push-in CAGE CLAMP®
- Push-in termination of solid and ferruled conductors
- Intuitive and tool-free operation
- Several clamping units can be held open simultaneously – convenient for terminating multi-core cables
- Testing can be performed both parallel and perpendicular to conductor entry

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 4 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



### Electrical Data

Pin spacing	5 mm / 0.197 inch			7.5 mm / 0.295 inch			11.5 mm / 0.453 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2	3	2	2
Rated voltage	320 V	400 V	630 V	630 V	630 V	1000 V	1000 V	1000 V	1000 V
Rated surge voltage	4 kV	4 kV	4 kV	6 kV	6 kV	6 kV	8 kV	8 kV	8 kV
Rated current	32 A	32 A	32 A	32 A	32 A	32 A	32 A	32 A	32 A

Approvals per	UL 1059			UL 1059			UL 1059		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	300 V	600 V	600 V	600 V	–
Rated current	20 A	–	10 A	20 A	20 A	5 A	20 A	20 A	–

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 ... 11 mm / 0.35 ... 0.43 inch
Conductor entry angle to the PCB	90°
Conductor range	
Solid conductor	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with twin ferrule	0.25 ... 1.5 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	4 mm
Solder pin dimensions	0.8 x 1 mm
Drilled hole diameter	1.3 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

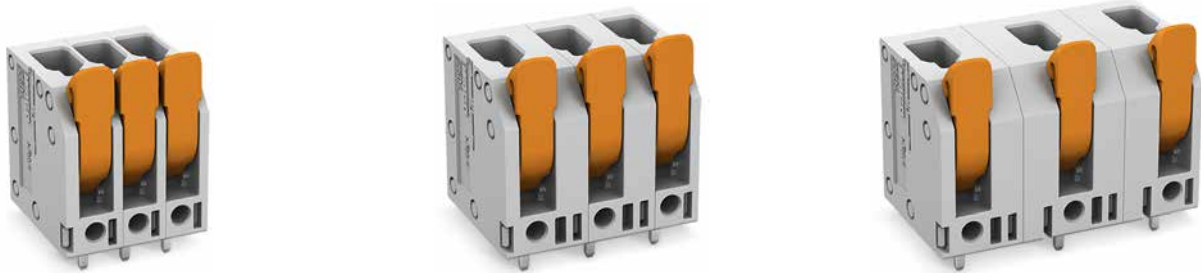
PCB Terminal Block; with Levers; 2 Solder Pins/Pole; 4 mm<sup>2</sup>  
Pin Spacing: 5 mm; 7.5 mm; 11.5 mm  
2604 Series

PUSH-IN CAGE CLAMP®

Pin spacing: 5 mm / 0.197 inch

Pin spacing: 7.5 mm / 0.295 inch

Pin spacing: 11.5 mm / 0.453 inch

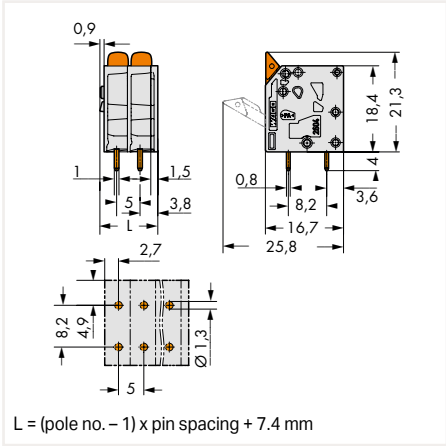


Pole No.	Item No.	Pack. Unit
1	2604-3101	250
2	2604-3102	180
3	2604-3103	120
4	2604-3104	90
5	2604-3105	70
6	2604-3106	50
7	2604-3107	50
8	2604-3108	40
9	2604-3109	40
10	2604-3110	30
11	2604-3111	30
12	2604-3112	30

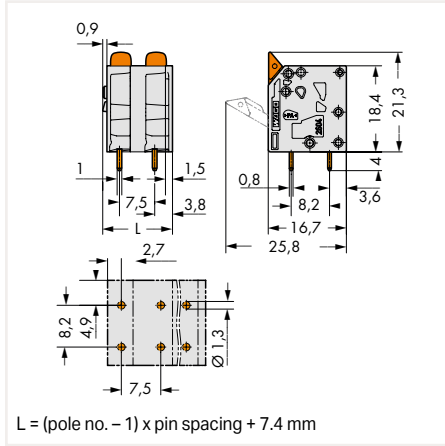
Pole No.	Item No.	Pack. Unit
2	2604-3302	150
3	2604-3303	100
4	2604-3304	70
5	2604-3305	50
6	2604-3306	45
7	2604-3307	40
8	2604-3308	30
9	2604-3309	30
10	2604-3310	25
11	2604-3311	25
12	2604-3312	25

Pole No.	Item No.	Pack. Unit
2	2604-3502	120
3	2604-3503	70
4	2604-3504	50
5	2604-3505	40
6	2604-3506	30
7	2604-3507	25
8	2604-3508	25
9	2604-3509	25
10	2604-3510	20
11	2604-3511	20
12	2604-3512	15

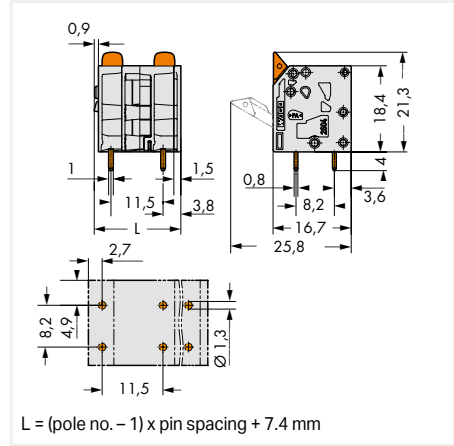
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



Available upon request (depending on quantity required):

- Other pole numbers
- Other colors
- Direct marking

## PCB Terminal Block; 2 Solder Pins/Pole; 4 mm<sup>2</sup>

Pin Spacing: 5 mm; 7.5 mm; 11.5 mm

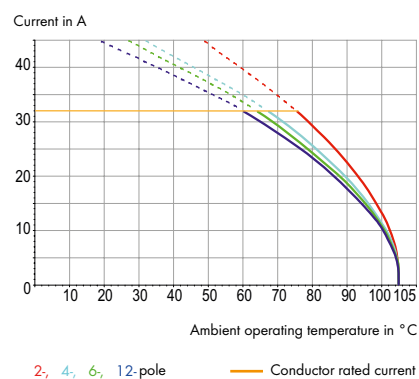
2624 Series



- PCB terminal block with Push-in CAGE CLAMP® connection
- Push-in termination of solid and ferruled conductors
- Ideal for panel feedthrough applications via operation parallel to conductor entry
- Testing can be performed both parallel and perpendicular to conductor entry

### Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 4 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



### Electrical Data

Pin spacing	5 mm / 0.197 inch			7.5 mm / 0.295 inch			11.5 mm / 0.453 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2	3	2	2
Rated voltage	320 V	400 V	630 V	630 V	630 V	1000 V	1000 V	1000 V	1000 V
Rated surge voltage	4 kV	4 kV	4 kV	6 kV	6 kV	6 kV	8 kV	8 kV	8 kV
Rated current	41 A	41 A	41 A	41 A	41 A	41 A	41 A	41 A	41 A

Approvals per	UL 1059			UL 1059			UL 1059		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	150 V	300 V	600 V	600 V	–
Rated current	26 A	–	10 A	26 A	26 A	10 A	26 A	26 A	–

### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	10 ... 12 mm / 0.39 ... 0.47 inch
Conductor entry angle to the PCB	0°
Conductor range	
Solid conductor	0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Fine-stranded conductor	0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with twin ferrule	0.25 ... 1.5 mm <sup>2</sup>

### Solder Pin Data

Solder pin length	4 mm
Solder pin dimensions	0.8 x 1 mm
Drilled hole diameter	1.3 <sup>+0.1</sup> mm

### Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

PCB Terminal Block; 2 Solder Pins/Pole; 4 mm<sup>2</sup>  
Pin Spacing: 5 mm; 7.5 mm; 11.5 mm  
2624 Series

PUSH-IN CAGE CLAMP®

Pin spacing: 5 mm / 0.197 inch

Pin spacing: 7.5 mm / 0.295 inch

Pin spacing: 11.5 mm / 0.453 inch

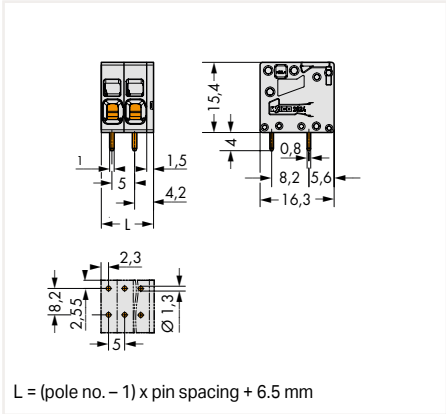


Pole No.	Item No.	Pack. Unit
1	2624-1101	300
2	2624-1102	200
3	2624-1103	150
4	2624-1104	100
5	2624-1105	100
6	2624-1106	80
7	2624-1107	50
8	2624-1108	50
9	2624-1109	50
10	2624-1110	40
11	2624-1111	35
12	2624-1112	35

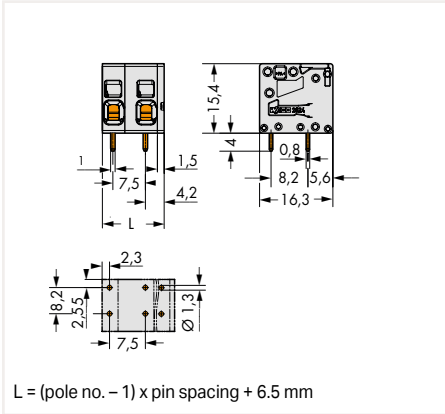
Pole No.	Item No.	Pack. Unit
2	2624-1302	200
3	2624-1303	120
4	2624-1304	80
5	2624-1305	70
6	2624-1306	50
7	2624-1307	50
8	2624-1308	40
9	2624-1309	35
10	2624-1310	35
11	2624-1311	25
12	2624-1312	25

Pole No.	Item No.	Pack. Unit
2	2624-1502	100
3	2624-1503	80
4	2624-1504	50
5	2624-1505	40
6	2624-1506	40
7	2624-1507	30
8	2624-1508	25
9	2624-1509	25
10	2624-1510	20
11	2624-1511	20
12	2624-1512	20

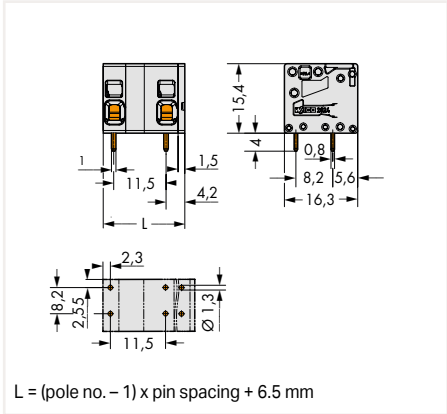
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



Available upon request (depending on quantity required):

- Other pole numbers
- Other colors
- Direct marking



# PCB Terminal Block; 2 Solder Pins/Pole; 4 mm<sup>2</sup>

Pin Spacing: 5 mm; 7.5 mm; 11.5 mm

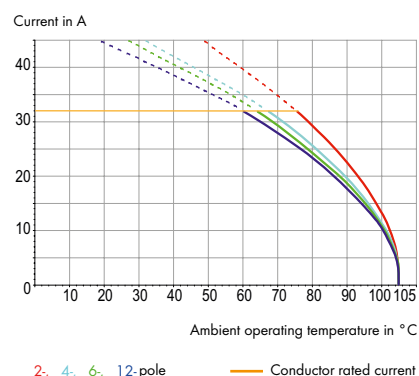
2624 Series



- PCB terminal block with Push-in CAGE CLAMP® connection
- Push-in termination of solid and ferruled conductors
- Ideal for panel feedthrough applications via operation parallel to conductor entry
- Testing can be performed both parallel and perpendicular to conductor entry

## Current-Carrying Capacity Curve

Pin spacing: 5 mm / Conductor cross-section: 4 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 1



## Electrical Data

Pin spacing	5 mm / 0.197 inch			7.5 mm / 0.295 inch			11.5 mm / 0.453 inch		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2	3	2	2
Rated voltage	320 V	400 V	630 V	630 V	630 V	1000 V	1000 V	1000 V	1000 V
Rated surge voltage	4 kV	4 kV	4 kV	6 kV	6 kV	6 kV	8 kV	8 kV	8 kV
Rated current	41 A	41 A	41 A	41 A	41 A	41 A	41 A	41 A	41 A

Approvals per	UL 1059			UL 1059			UL 1059		
Use group	B	C	D	B	C	D	B	C	D
Rated voltage	300 V	–	300 V	300 V	150 V	300 V	600 V	600 V	–
Rated current	26 A	–	10 A	26 A	26 A	10 A	26 A	26 A	–

## Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	10 ... 12 mm / 0.39 ... 0.47 inch
Conductor entry angle to the PCB	90°
Conductor range	
Solid conductor	0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Fine-stranded conductor	0.2 ... 6 mm <sup>2</sup> / 24 ... 10 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor; with twin ferrule	0.25 ... 1.5 mm <sup>2</sup>

## Solder Pin Data

Solder pin length	4 mm
Solder pin dimensions	0.8 x 1 mm
Drilled hole diameter	1.3 <sup>+0.1</sup> mm

## Material Data

Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Limit temperature range	–60 ... +105 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

\*(III / 2) ≙ Overvoltage category III /  
Pollution degree 2

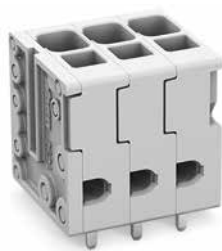
PCB Terminal Block; 2 Solder Pins/Pole; 4 mm<sup>2</sup>  
Pin Spacing: 5 mm; 7.5 mm; 11.5 mm  
2624 Series

PUSH-IN CAGE CLAMP®

Pin spacing: 5 mm / 0.197 inch

Pin spacing: 7.5 mm / 0.295 inch

Pin spacing: 11.5 mm / 0.453 inch

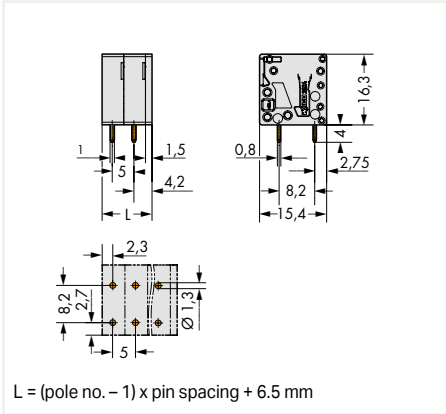


Pole No.	Item No.	Pack. Unit
1	2624-3101	300
2	2624-3102	200
3	2624-3103	150
4	2624-3104	100
5	2624-3105	100
6	2624-3106	80
7	2624-3107	50
8	2624-3108	50
9	2624-3109	50
10	2624-3110	40
11	2624-3111	35
12	2624-3112	35

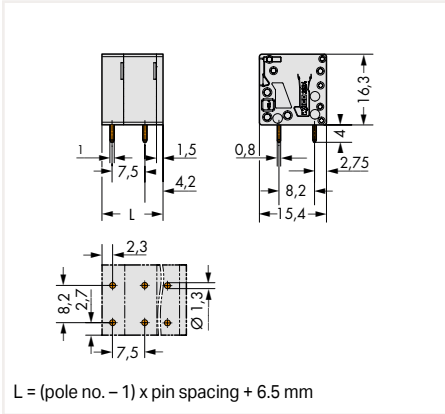
Pole No.	Item No.	Pack. Unit
2	2624-3302	200
3	2624-3303	120
4	2624-3304	80
5	2624-3305	70
6	2624-3306	50
7	2624-3307	50
8	2624-3308	40
9	2624-3309	35
10	2624-3310	35
11	2624-3311	25
12	2624-3312	25

Pole No.	Item No.	Pack. Unit
2	2624-3502	100
3	2624-3503	80
4	2624-3504	50
5	2624-3505	40
6	2624-3506	40
7	2624-3507	30
8	2624-3508	25
9	2624-3509	25
10	2624-3510	20
11	2624-3511	20
12	2624-3512	20

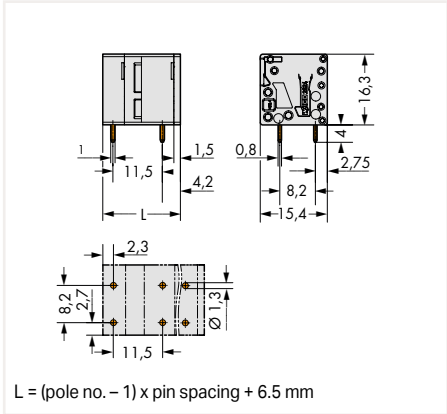
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



Available upon request (depending on quantity required):

- Other pole numbers
- Other colors
- Direct marking



# WAGO MULTI CONNECTION SYSTEM

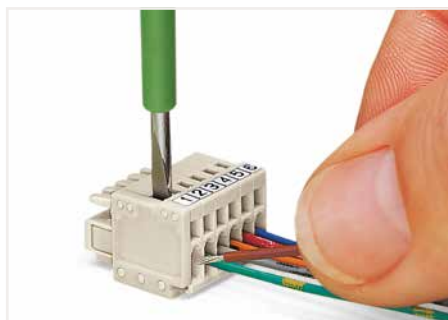
## WAGO MULTI CONNECTION SYSTEM

			Page
	MICRO; Pin Spacing: 2.5 mm	733 Series	101
	MINI HD; Pin Spacing: 3.5 mm	713 Series	101
	MINI SL; Pin Spacing: 3.5 mm	714 Series	101
	MINI; Pin Spacing: 3.5 mm	734 Series 2734 Series	102
	MINI; Pin Spacing: 3.81 mm	734 Series Seire 2734	103
	MIDI; Pin Spacing: 5 mm	721 Series 722 Series 2721 Series	104
	MIDI Classic; Pin Spacing: 5 mm	231 Series 232 Series 731 Series 2231 Series	105
	MIDI Classic; Pin Spacing: 5.08 mm	231 Series 232 Series 2231 Series	106
	MIDI; Pin Spacing: 7.5 mm	721 Series 722 Series 723 Series 2721 Series	107
	MIDI Classic; Pin Spacing: 7.5 mm	231 Series 232 Series 731 Series 2231 Series	108
	MIDI Classic; Pin Spacing: 7.62 mm	231 Series 232 Series 731 Series 732 Series 2231 Series	109
	MAXI; Pin Spacing: 7.62	831 Series	109
	<i>picoMAX</i> ® Pluggable Connectors <i>picoMAX</i> ® eCOM Pluggable Connectors	2091 Series 2092 Series	111

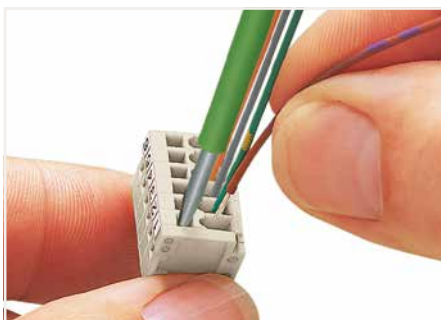
## MCS – MULTI CONNECTION SYSTEM

Description and Installation, e.g., for CAGE CLAMP® Connection

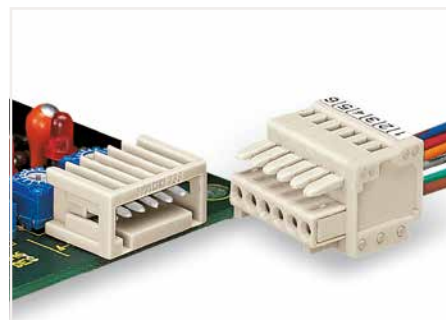
3



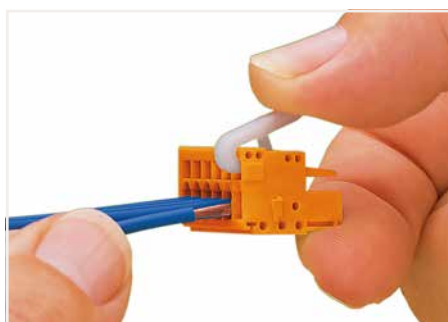
Inserting a conductor via (2.5 x 0.4) mm screwdriver.  
Operation is performed perpendicular to conductor entry.



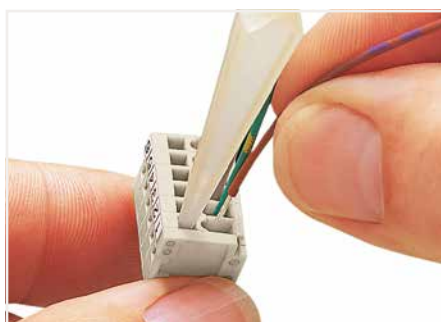
Inserting a conductor via (2.5 x 0.4) mm screwdriver.  
Operation parallel to conductor entry



Male header and female connector – 100% protected against mismatching  
Only mating halves with the same pole number can be connected.



Inserting a conductor via push-button.  
(Item No. 734-230)



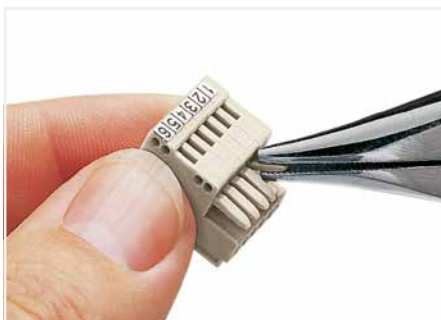
Inserting a conductor via operating tool.  
(Item No. 233-332)  
Operation parallel to conductor entry



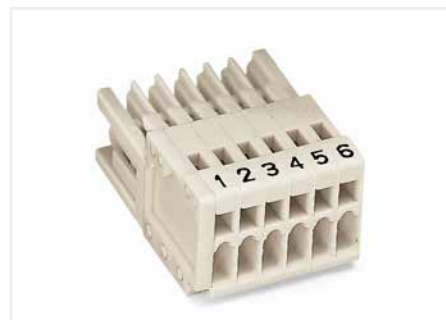
Testing via 1 mm Ø test pin (Item No. 735-500),  
touch contact.



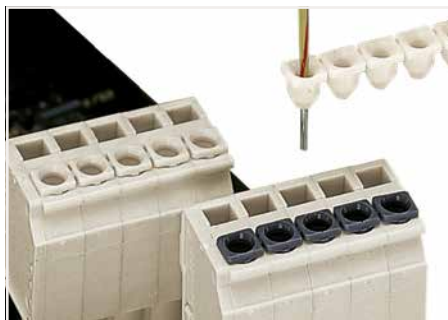
Coding a male header – fitting coding key(s).



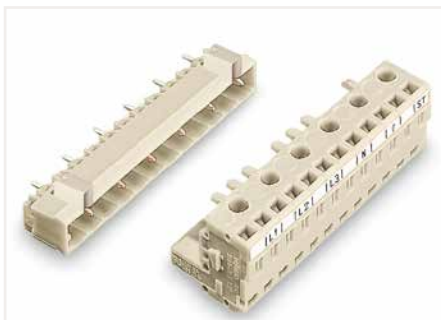
Coding a female connector – removing coding finger(s).



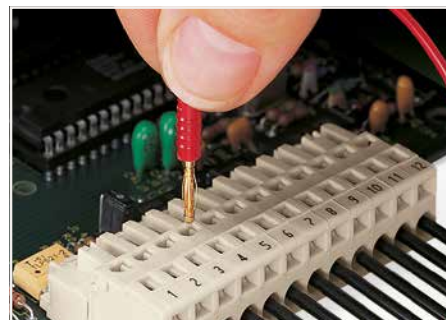
Factory marking or custom marking via self-adhesive strips.



Prevents the insulation of smaller conductors from being inserted into the clamping unit.



For 10 mm pin spacing, please contact factory.






















Testing with 2 mm or 2.3 mm Ø test plug.






# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing

2.5 mm					
733 Series; MICRO; 100% Mismatching Protection; 160 V; 6 A					
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 12 poles		Male headers with straight solder pins; 2 ... 12 poles		Male headers with press-in pins; 2 ... 12 poles	
○		●		○	
733-332	200	733-332/105-604	200	733-332/100-000	200
733-342	100	733-342/105-604	100	733-342/100-000	100
Male headers with angled solder pins; 2 ... 12 poles		Male headers with angled solder pins; 2 ... 12 poles		Female connectors; 2 ... 12 poles	
○		●		○	
733-362	200	733-362/105-604	200	733-102	200
733-372	100	733-372/105-604	100	733-112	50
				Female connectors with locking levers; 2 ... 12 poles	
				○	
				733-102/037-000	100
				733-112/037-000	50

3.5 mm					
713 Series; MINI HD; 100% Mismatching Protection; 160 V; 10 A					
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 6 ... 36 poles		Male headers with angled solder pins; 6 ... 36 poles		Male headers with straight solder pins; 6 ... 36 poles	
●		●		●	
713-1403	100	713-1423	100	713-1403/105-000	100
713-1418	20	713-1438	20	713-1418/105-000	20
Male headers with straight solder pins and levers; 6 ... 36 poles		Male headers with angled solder pins and levers; 6 ... 36 poles		Male headers with straight solder pins and levers; 6 ... 36 poles	
●		●		●	
713-1403/037-000	50	713-1423/037-000	50	713-1403/116-000	50
713-1418/037-000	10	713-1438/037-000	10	713-1418/116-000	10
Male headers with straight solder pins and threaded flanges; 6 ... 36 poles		Male headers with angled solder pins and threaded flanges; 6 ... 36 poles		Male headers with straight solder pins and threaded flanges; 6 ... 36 poles	
●		●		●	
713-1403/107-000	50	713-1423/107-000	50	713-1403/117-000	50
713-1418/107-000	10	713-1438/107-000	10	713-1418/117-000	10
				Female connectors; 6 ... 36 poles	
				○	
				713-1103	100
				713-1118	20
				Female connectors with levers; 6 ... 36 poles	
				●	
				713-1103/037-000	50
				713-1118/037-000	51
				Female connectors with threaded flanges; 6 ... 36 poles	
				●	
				713-1103/107-000	50
				713-1118/107-000	10

3.5 mm					
714 Series; MINI SL; 160 V; 8 A					
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 16 poles		Male headers with angled solder pins; 2 ... 16 poles		Female connectors; 2 ... 16 poles	
●		●		●	
714-132	200	714-162	200	714-102	200
714-146	100	714-176	100	714-116	50
				0.2 ... 1.5 mm² / 24 ... 16 AWG	



Press-in technology



Through-hole reflow soldering




















# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing

3.5 mm							
734/2734 Series; MINI; 100% Mismatching Protection							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 24 poles		Female headers with straight solder pins; 2 ... 24 poles		Female connectors; 2 ... 24 poles		Male connectors; 2 ... 24 poles	
○		○		○		○	
734-132	200	734-462	200	734-102	200	734-302	200
734-154	50	734-484	25	734-124	25	734-324	25
Male headers with angled solder pins; 2 ... 24 poles		Female headers with angled solder pins; 2 ... 24 poles		Female connectors with locking levers; 2 ... 24 poles		Male connectors with mounting flanges; 2 ... 24 poles	
○		○		○		○	
734-162	200	734-532	200	734-102/037-000	100	734-302/019-000	100
734-184	50	734-554	25	734-124/037-000	10	734-324/019-000	10
Male headers with straight solder pins; 2 ... 16 poles		Female headers with straight solder pins and locking levers; 2 ... 24 poles		Female connectors with snap-in mounting feet; 2 ... 24 poles		Male connectors with snap-in mounting feet; 2 ... 24 poles	
THR		○		○		○	
734-132/105-604	200	734-462/037-000	100	734-102/008-000	200	734-302/018-000	200
734-146/105-604	50	734-484/037-000	10	734-124/008-000	25	734-324/018-000	25
Male headers with angled solder pins; 2 ... 16 poles		Female headers with angled solder pins and locking levers; 2 ... 24 poles					
THR		○					
734-162/105-604	200	734-532/037-000	100				
734-176/105-604	50	734-554/037-000	10				
Male headers with straight press-in pins; 2 ... 12 poles						Female connectors with push-buttons; 2 ... 24 poles	
○						○	
734-132/100-000	200					0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG	
734-142/100-000	100					2734-102	200
Double-deck male headers with angled solder pins; 4 ... 24 poles						2734-124	25
○						Female connectors with push-buttons and locking levers; 2 ... 24 poles	
734-402	100					○	
734-412	50					0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG	
Double-deck male headers with angled solder pins and support; 4 ... 24 poles						2734-102/037-000	100
○						2734-124/037-000	10
734-402/001-000	100					Female connectors with push-buttons and mounting flanges; 2 ... 24 poles	
734-412/001-000	50					○	
Male headers with straight solder pins and threaded flanges; 2 ... 24 poles		Male headers with angled solder pins and threaded flanges; 2 ... 24 poles		Female connectors with screw flanges; 2 ... 24 poles		Male connectors with threaded flanges; 2 ... 24 poles	
○		○		○		○	
734-132/108-000	200	734-162/108-000	200	734-102/107-000	100	734-302/109-000	100
734-154/108-000	50	734-184/108-000	50	734-124/107-000	10	734-324/109-000	10
				0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG	
						0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG	
						2734-102/107-000	100
						2734-124/107-000	10

# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing

3.81 mm							
734/2734 Series; MINI; 100% Mismatch Protection							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 20 poles		Female headers with straight solder pins; 2 ... 20 poles		Female connectors; 2 ... 20 poles		Male connectors; 2 ... 20 poles	
0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG	
734-232 200		734-502 200		734-202 200		734-332 200	
734-250 50		734-520 25		734-220 25		734-350 25	
Male headers with angled solder pins; 2 ... 20 poles		Female headers with angled solder pins; 2 ... 20 poles		Female connectors with locking levers; 2 ... 20 poles		Male connectors with mounting flanges; 2 ... 20 poles	
0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG	
734-262 200		734-562 200		734-202/037-000 100		734-332/019-000 100	
734-280 50		734-580 25		734-220/037-000 10		734-350/019-000 10	
Male headers with straight solder pins; 2 ... 16 poles		Female headers with straight solder pins and locking levers; 2 ... 20 poles		Female connectors with snap-in mounting feet; 2 ... 20 poles		Male connectors with snap-in mounting feet; 2 ... 20 poles	
0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG		0.2 ... 1.5 mm <sup>2</sup> / 24 ... 14 AWG	
734-232/105-604 200		734-502/037-000 100		734-202/008-000 200		734-332/018-000 200	
734-242/105-604 100		734-520/037-000 10		734-220/008-000 25		734-350/018-000 25	
Male headers with angled solder pins; 2 ... 16 poles		Female headers with angled solder pins and locking levers; 2 ... 20 poles					
734-262/105-604 200		734-562/037-000 100					
734-272/105-604 100		734-580/037-000 10					
Male headers with straight press-in pins; 2 ... 12 poles							
734-232/100-000 200							
734-242/100-000 100							
Double-deck male headers with angled solder pins; 4 ... 24 poles							
734-432 100							
734-442 50							
Double-deck male headers with angled solder pins and support; 4 ... 24 poles							
734-432/001-000 100							
734-442/001-000 50							




















3

# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing

5 mm

721/722/2721 Series; MIDI; 100% Mismatch Protection; 320 V; 12 A (16 A)

Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 20 poles		Female headers with straight solder pins; 2 ... 20 poles		Female connectors; 2 ... 20 poles		Male connectors; 2 ... 20 poles		Female connectors with push-buttons; 2 ... 20 poles	
									
721-132/001-000	200	722-132	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-150/001-000	50	722-150	10	721-102/026-000	100	721-602	100	7271-102/026-000	100
Male headers with angled solder pins; 2 ... 20 poles		Female headers with angled solder pins; 2 ... 20 poles		721-120/026-000	10	721-620	10	7271-120/026-000	10
				Female connectors with locking levers; 2 ... 20 poles		Male connectors with mounting flanges; 2 ... 20 poles		Female connectors with push-buttons and locking levers; 2 ... 20 poles	
721-432/001-000	200	722-232	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-450/001-000	50	722-250	10	721-102/037-000	100	721-602/019-000	100	7271-102/037-000	100
Male headers with straight press-in pins; 8 A; 2 ... 12 poles		Female headers with straight solder pins and locking levers; 2 ... 20 poles		721-120/037-000	10	721-620/019-000	10	7271-120/037-000	10
				Female connectors with snap-in mounting feet; 2 ... 20 poles		Male connectors with snap-in mounting feet; 2 ... 20 poles		Female connectors with push-buttons and snap-in mounting feet; 2 ... 20 poles	
721-162/100-000	200	722-132/039-000	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-172/100-000	100	722-150/039-000	10	721-102/008-000	100	721-602/018-000	100	7271-102/008-000	100
Male headers with straight solder pins; 16 A; 2 ... 20 poles		Female headers with angled solder pins and locking levers; 2 ... 20 poles		721-120/008-000	10	721-620/018-000	10	7271-120/008-000	10
				Female connectors with mounting flanges; 2 ... 20 poles		Male connectors with snap-in flanges; 2 ... 20 poles		Female connectors with push-buttons and mounting flanges; 2 ... 20 poles	
721-162/001-000	200	722-232/039-000	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-180/001-000	50	722-250/039-000	10	721-102/031-000	100	721-602/114-000	100	7271-102/031-000	100
Male headers with angled solder pins; 16 A; 2 ... 20 poles		Female headers with straight solder pins and mounting flanges; 2 ... 20 poles		721-120/031-000	10	721-620/114-000	10	7271-120/031-000	10
				Angled female connectors, conductor entry same direction as latches; 2 ... 20 poles					
721-462/001-000	200	722-132/031-000	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG					
721-480/001-000	50	722-150/031-000	10	722-202/026-000	100				
Male connectors for rail-mount terminal blocks; 2 ... 20 poles		Female headers with angled solder pins and mounting flanges; 2 ... 20 poles		722-220/026-000	10				
				Angled female connectors, conductor entry opposite of latches; 2 ... 20 poles					
721-162/003-000	200	722-232/031-000	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG					
721-180/003-000	50	722-250/031-000	10	722-102/026-000	100				
Female connectors for rail-mount terminal blocks; 2 ... 20 poles		Female headers with straight solder pins and spacers; 2 ... 20 poles		722-120/026-000	10				
				2-conductor female connectors; 2 ... 16 poles				Female connectors with flanges for panel mounting; 2 ... 20 poles	
722-132/005-000	100	722-132/047-000	100	0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG				0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
722-150/005-000	10	722-150/047-000	10	721-2102/026-000	100			721-302/031-000	100
Female connectors with locking levers for rail-mount terminal blocks; 2 ... 20 poles		Female headers with angled solder pins and spacers; 2 ... 20 poles		721-2116/026-000	25			721-320/031-000	10
				2-conductor female connectors with locking levers; 2 ... 16 poles				Female connectors with snap-in feet for panel mounting; 2 ... 20 poles	
722-132/005-000/039-000	100	722-232/047-000	100	0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG				0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
722-150/005-000/039-000	10	722-250/047-000	10	721-2102/037-000	100			721-302/008-000	100
				721-2116/037-000	10			721-320/008-000	10

# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing





































5 mm							
231/232/731/2231 Series; MIDI Classic; 320 V; 12 A							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 24 poles		Female headers with straight solder pins; 2 ... 24 poles		Female connectors; 2 ... 24 poles		Male connectors; 2 ... 24 poles	
231-132/001-000	200	232-132	100	231-102/026-000	100	231-602	100
231-154/001-000	50	232-154	10	231-124/026-000	10	231-624	10
Male headers with angled solder pins; 2 ... 24 poles		Female headers with angled solder pins; 2 ... 24 poles		Female connectors with locking levers; 2 ... 24 poles		Male connectors with mounting flanges; 2 ... 24 poles	
231-432/001-000	200	232-232	100	231-102/037-000	100	231-602/019-000	100
231-454/001-000	50	232-254	10	231-124/037-000	10	231-624/019-000	10
Male headers with straight solder pins and mounting flanges; 2 ... 14 poles		Female headers with straight solder pins and locking levers; 2 ... 24 poles		Female connectors with snap-in mounting feet; 2 ... 24 poles		Male connectors with snap-in mounting feet; 2 ... 24 poles	
231-132/040-000	200	232-132/039-000	100	231-102/008-000	100	231-602/018-000	100
231-144/040-000	50	232-154/039-000	10	231-124/008-000	10	231-624/018-000	10
Male headers with angled solder pins and mounting flanges; 2 ... 14 poles		Female headers with angled solder pins and locking levers; 2 ... 24 poles		Female connectors with mounting flanges; 2 ... 24 poles		Male connectors with snap-in flanges; 2 ... 24 poles	
231-432/040-000	200	232-232/039-000	100	231-102/031-000	100	231-602/114-000	50
231-444/040-000	50	232-254/039-000	10	231-124/031-000	10	231-624/114-000	10
Male headers with straight solder pins; 2 ... 12 poles		Female headers with straight solder pins and mounting flanges; 2 ... 24 poles		Angled female connectors, conductor entry same direction as latches; 2 ... 24 poles			Female connectors with push-buttons and integrated end plate; 2 ... 24 poles
231-132/001-000/105-604	200	232-132/031-000	100	232-202/026-000	100		231-102/102-000
231-142/001-000/105-604	100	232-154/031-000	10	232-224/026-000	10		231-124/102-000
Male headers with angled solder pins; 2 ... 12 poles		Female headers with angled solder pins and mounting flanges; 2 ... 24 poles		Angled female connectors, conductor entry opposite of latches; 2 ... 24 poles			Double-pin male connectors for DIN-35 rail mounting; 2 ... 24 poles
231-432/001-000/105-604	200	232-232/031-000	100	232-102/026-000	100		232-502/007-000
231-442/001-000/105-604	100	232-254/031-000	10	232-124/026-000	10		232-524/007-000
Double-deck male headers; 2 ... 16 poles				2-conductor female connectors; 2 ... 16 poles			Female connectors with mounting flanges for panel mounting; 2 ... 20 poles
232-332	100			0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG			0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
232-346	25			231-2102/026-000	100		731-502/031-000
Male connectors for rail-mount terminal blocks; 2 ... 20 poles		Female connectors for rail-mount terminal blocks; 2 ... 20 poles		2-conductor female connectors with locking levers; 2 ... 16 poles			Female connectors with snap-in feet for panel mounting; 2 ... 20 poles
231-162/003-000	200	232-132/005-000	100	231-2102/037-000	100		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
231-180/003-000	50	232-150/005-000	10	231-2116/037-000	10		731-502/008-000
							731-520/008-000

3



























# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing

5.08 mm									
231/232/731/2231 Series; MIDI Classic; 320 V; 12 A (16 A)									
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 24 poles		Female headers with straight solder pins; 2 ... 24 poles		Female connectors; 2 ... 24 poles		Male connectors; 2 ... 24 poles		Female connectors with push-buttons; 2 ... 24 poles	
231-332/001-000	200	232-162	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-354/001-000	50	232-184	10	231-302/026-000	100	231-632	100	2231-302/026-000	100
Male headers with angled solder pins; 2 ... 24 poles		Female headers with angled solder pins; 2 ... 24 poles		Female connectors with locking levers; 2 ... 24 poles		Male connectors with mounting flanges; 2 ... 24 poles		Female connectors with push-buttons and locking levers; 2 ... 24 poles	
231-532/001-000	200	232-262	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-554/001-000	50	232-284	10	231-302/037-000	100	231-632/019-000	100	2231-302/037-000	100
Male headers with straight solder pins; 16 A; 2 ... 24 poles		Female headers with straight solder pins and locking levers; 2 ... 24 poles		Female connectors with snap-in mounting feet; 2 ... 24 poles		Male connectors with snap-in mounting feet; 2 ... 24 poles		Female connectors with push-buttons and snap-in mounting feet; 2 ... 24 poles	
231-362/001-000	200	232-162/039-000	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-384/001-000	50	232-184/039-000	10	231-302/008-000	100	231-632/018-000	100	2231-302/008-000	100
Male headers with angled solder pins; 16 A; 2 ... 24 poles		Female headers with angled solder pins and locking levers; 2 ... 24 poles		Female connectors with mounting flanges; 2 ... 24 poles		Male connectors with snap-in flanges; 2 ... 24 poles		Female connectors with push-buttons and mounting flanges; 2 ... 24 poles	
231-562/001-000	200	232-262/039-000	100	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-584/001-000	50	232-284/039-000	10	231-302/031-000	100	231-632/114-000	50	2231-302/031-000	100
Double-deck male headers; 2 ... 16 poles		Female headers with straight solder pins and mounting flanges; 2 ... 24 poles		2-conductor female connectors; 2 ... 16 poles		Male connectors with snap-in flanges; 2 ... 24 poles		Angled female connectors, conductor entry same direction as latches; 2 ... 24 poles	
232-362	100	232-162/031-000	100	0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG				0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
232-376	25	232-184/031-000	10	231-2302/026-000	100			232-402/026-000	100
		Female headers with angled solder pins and mounting flanges; 2 ... 24 poles		2-conductor female connectors with locking levers; 2 ... 16 poles				232-424/026-000	10
				0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG				Angled female connectors, conductor entry opposite of latches; 2 ... 24 poles	
		232-262/031-000	100	231-2302/037-000	100			0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
		232-284/031-000	10	231-2316/026-000	25			232-302/026-000	100
				2-conductor female connectors with screw flanges; 2 ... 16 poles		Male connectors with snap-in and threaded flanges; 2 ... 16 poles		232-324/026-000	10
Male headers with straight solder pins and threaded flanges; 2 ... 16 poles				0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		Double-pin male connectors for DIN-35 rail mounting; 2 ... 24 poles	
231-332/108-000	200			231-2302/107-000	100	231-632/129-000	50	232-532/007-000	100
231-346/108-000	50			231-2316/107-000	10	231-646/129-000	10	232-554/007-000	10
Male headers with angled solder pins and threaded flanges; 2 ... 16 poles				Female connectors with screw flanges; 2 ... 16 poles		Male connectors with threaded flanges; 2 ... 16 poles		Female connectors with push-buttons and screw flanges; 2 ... 24 poles	
231-532/108-000	200			0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-546/108-000	50			231-302/107-000	100	231-632/109-000	100	2231-302/107-000	100
				231-316/107-000	10	231-646/109-000	10	2231-316/107-000	10

# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing

7.5 mm							
721/722/723/2721 Series; MIDI; 100% Mismatch Protection; 630 V; 12 A (16 A)							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 12 poles		Female headers with straight solder pins; 2 ... 12 poles		Female connectors; 2 ... 12 poles		Male connectors; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-232/001-000 200		722-732 100		721-202/026-000 100		723-602 100	
721-242/001-000 50		722-742 10		721-212/026-000 25		723-612 25	
Male headers with angled solder pins; 2 ... 12 poles		Female headers with angled solder pins; 2 ... 12 poles		Female connectors with locking levers; 2 ... 12 poles		Male connectors with mounting flanges; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-832/001-000 200		722-832 100		721-202/037-000 50		723-602/019-000 100	
721-842/001-000 50		722-842 10		721-212/037-000 10		723-612/019-000 25	
Male headers with straight solder pins; 16 A; 2 ... 12 poles		Female headers with straight solder pins and locking levers; 2 ... 12 poles		Female connectors with snap-in mounting feet; 2 ... 12 poles		Male connectors with snap-in mounting feet; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-262/001-000 200		722-732/039-000 100		721-202/008-000 50		723-602/018-000 100	
721-272/001-000 50		722-742/039-000 10		721-212/008-000 10		723-612/018-000 25	
Male headers with angled solder pins; 16 A; 2 ... 12 poles		Female headers with angled solder pins and locking levers; 2 ... 12 poles		Female connectors with mounting flanges; 2 ... 12 poles		Male connectors with snap-in flanges; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
721-862/001-000 200		722-832/039-000 100		721-202/031-000 50		723-602/114-000 100	
721-872/001-000 50		722-842/039-000 10		721-212/031-000 10		723-612/114-000 25	
		Female headers with straight solder pins and mounting flanges; 2 ... 12 poles		2-conductor female connectors; 2 ... 16 poles			
		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG			
		722-732/031-000 100		721-2202/026-000 100			
		722-742/031-000 10		721-2212/026-000 25			
		Female headers with angled solder pins and mounting flanges; 2 ... 12 poles		2-conductor female connectors with locking levers; 2 ... 16 poles			
		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG			
		722-832/031-000 100		721-2202/037-000 100			
		722-842/031-000 10		721-2212/037-000 25			
		Female headers with straight solder pins and spacers; 2 ... 12 poles				Female connectors with flanges for panel mounting; 2 ... 12 poles	
		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG				0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
		722-732/047-000 100				721-332/031-000 50	
		722-742/047-000 10				721-342/031-000 10	
		Female headers with angled solder pins and spacers; 2 ... 12 poles				Female connectors with snap-in feet for panel mounting; 2 ... 12 poles	
		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG				0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
		722-832/047-000 100				721-332/008-000 100	
		722-842/047-000 10				721-342/008-000 25	

3






# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing




















### 7.5 mm







231/232/731/732/2231 Series; MIDI Classic; 100% Mismatching Protection; 630 V; 12 A (16 A)

Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 16 poles		Female headers with straight solder pins; 2 ... 16 poles		Female connectors; 2 ... 16 poles		Male connectors; 2 ... 16 poles		Female connectors with push-buttons; 2 ... 16 poles	
									
231-232/001-000 200		232-732 100		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-246/001-000 50		232-746 10		231-202/026-000 100		731-602 100		2231-202/026-000 100	
Male headers with angled solder pins; 2 ... 16 poles		Female headers with angled solder pins; 2 ... 16 poles		231-216/026-000 10		731-616 10		2231-216/026-000 10	
				Female connectors with locking levers; 2 ... 16 poles		Male connectors with mounting flanges; 2 ... 16 poles		Female connectors with push-buttons and locking levers; 2 ... 16 poles	
231-832/001-000 200		232-832 100		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-846/001-000 50		232-846 10		231-202/037-000 50		731-602/019-000 100		2231-202/037-000 50	
Male headers with straight solder pins; 16 A; 2 ... 16 poles		Female headers with straight solder pins and locking levers; 2 ... 16 poles		231-216/037-000 10		731-616/019-000 10		2231-216/037-000 10	
				Female connectors with snap-in mounting feet; 2 ... 16 poles		Male connectors with snap-in mounting feet; 2 ... 16 poles		Female connectors with push-buttons and snap-in mounting feet; 2 ... 16 poles	
231-262/001-000 200		232-732/039-000 100		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-276/001-000 50		232-746/039-000 10		231-202/008-000 100		731-602/018-000 100		2231-202/008-000 100	
Male headers with angled solder pins; 16 A; 2 ... 16 poles		Female headers with angled solder pins and locking levers; 2 ... 16 poles		231-216/008-000 10		731-616/018-000 10		2231-216/008-000 10	
				Female connectors with mounting flanges; 2 ... 16 poles		Male connectors with snap-in flanges; 2 ... 16 poles		Female connectors with push-buttons and mounting flanges; 2 ... 16 poles	
231-862/001-000 200		232-832/039-000 100		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG	
231-876/001-000 50		232-846/039-000 10		231-202/031-000 50		731-602/114-000 50		2231-202/031-000 50	
Male headers with straight solder pins; 2 ... 12 poles		Female headers with straight solder pins and mounting flanges; 2 ... 16 poles		231-216/031-000 10		731-616/114-000 10		2231-216/031-000 10	
				2-conductor female connectors; 2 ... 12 poles					
231-232/001-000/105-604 200		232-732/031-000 100		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG					
231-242/001-000/105-604 50		232-746/031-000 10		231-2202/026-000 100					
Male headers with angled solder pins; 2 ... 12 poles		Female headers with angled solder pins and mounting flanges; 2 ... 16 poles		231-2212/026-000 25				Double-pin male connectors for DIN-35 rail mounting; 2 ... 24 poles	
				2-conductor female connectors with locking levers; 2 ... 12 poles					
231-832/001-000/105-604 200		232-832/031-000 100		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG					
231-842/001-000/105-604 50		232-846/031-000 10		231-2202/037-000 100				232-562/007-000 50	
Male headers with straight solder pins; 16 A; 2 ... 12 poles		Female headers with straight solder pins and spacers; 2 ... 16 poles		231-2212/037-000 25				232-572/007-000 10	
								Angled female connectors with mounting flanges; 2 ... 12 poles	
231-262/001-000/105-604 200		232-732/047-000 100							
231-272/001-000/105-604 50		232-746/047-000 10						731-532/031-000 50	
Male headers with angled solder pins; 16 A; 2 ... 12 poles		Female headers with angled solder pins and spacers; 2 ... 16 poles						731-546/031-000 10	
								Female connectors with snap-in mounting feet; 2 ... 20 poles	
231-862/001-000/105-604 200		232-832/047-000 100							
231-872/001-000/105-604 50		232-846/047-000 10						731-532/008-000 100	
								731-546/008-000 10	

# MCS – MULTI CONNECTION SYSTEM

## Product Overview by Pin Spacing

7.62 mm							
231/232/731/2231 Series; MIDI Classic; 100% Mismatch Protection; 630 V; 12 A (16 A)							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 12 poles		Female headers with straight solder pins; 2 ... 12 poles		Female connectors; 2 ... 12 poles		Male connectors; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
231-732/001-000	200	232-762	100	231-702/026-000	100	731-632	50
231-742/001-000	50	232-772	10	231-712/026-000	10	731-642	10
Male headers with angled solder pins; 2 ... 12 poles		Female headers with angled solder pins; 2 ... 12 poles		Female connectors with locking levers; 2 ... 12 poles		Male connectors with mounting flanges; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
231-932/001-000	200	232-862	100	231-702/037-000	50	731-632/019-000	50
231-942/001-000	50	232-872	10	231-712/037-000	10	731-642/019-000	10
Male headers with straight solder pins; 16 A; 2 ... 12 poles		Female headers with straight solder pins and locking levers; 2 ... 12 poles		Female connectors with snap-in mounting feet; 2 ... 12 poles		Male connectors with snap-in mounting feet; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
231-762/001-000	200	232-762/039-000	100	231-702/008-000	100	731-632/018-000	100
231-772/001-000	50	232-772/039-000	10	231-712/008-000	10	731-642/018-000	10
Male headers with angled solder pins; 16 A; 2 ... 12 poles		Female headers with angled solder pins and locking levers; 2 ... 12 poles		Female connectors with mounting flanges; 2 ... 12 poles		Male connectors with snap-in flanges; 2 ... 12 poles	
0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG	
231-962/001-000	200	232-862/039-000	100	231-702/031-000	50	731-632/114-000	50
231-972/001-000	50	232-872/039-000	10	231-712/031-000	10	731-646/114-000	10
		Female headers with straight solder pins and mounting flanges; 2 ... 12 poles		2-conductor female connectors; 2 ... 12 poles		Double-pin male connectors for DIN-35 rail mounting; 2 ... 24 poles	
		0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG		0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG			
		232-762/031-000	100	231-2702/026-000	100	232-582/007-000	50
		232-772/031-000	10	231-2712/026-000	25	232-592/007-000	10
						732-122/026-000	100
						732-132/026-000	25

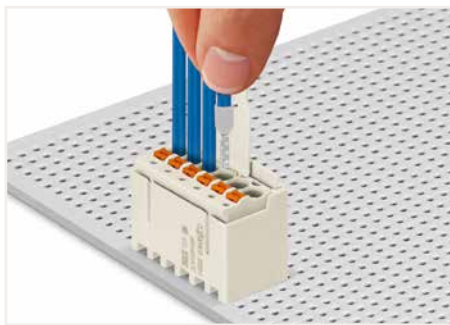
7.62 mm							
831 Series; MAXI; 100% Mismatch Protection; 1000 V; 41 A							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
Male headers with straight solder pins; 2 ... 9 poles		Female connectors; 2 ... 9 poles		Male connectors; 2 ... 9 poles		Male connectors with integrated mounting adapter for DIN-35 rail; 2 ... 9 poles	
0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG		0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG		0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG		0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG	
831-3602	48			831-3102	48	831-3202	48
831-3609	12			831-3109	12	831-3209	12
Male headers with angled solder pins; 2 ... 9 poles		Female connectors with locking levers; 2 ... 9 poles					
0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG		0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG					
831-3622	48			831-3102/037-000	48		
831-3629	12			831-3109/037-000	12		

## picoMAX® Pluggable Connectors

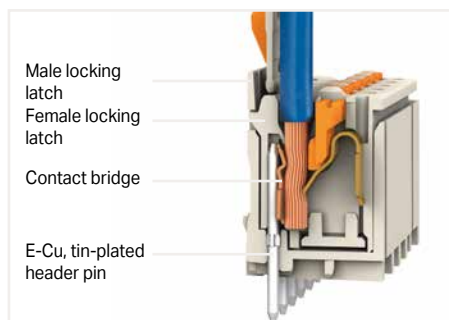
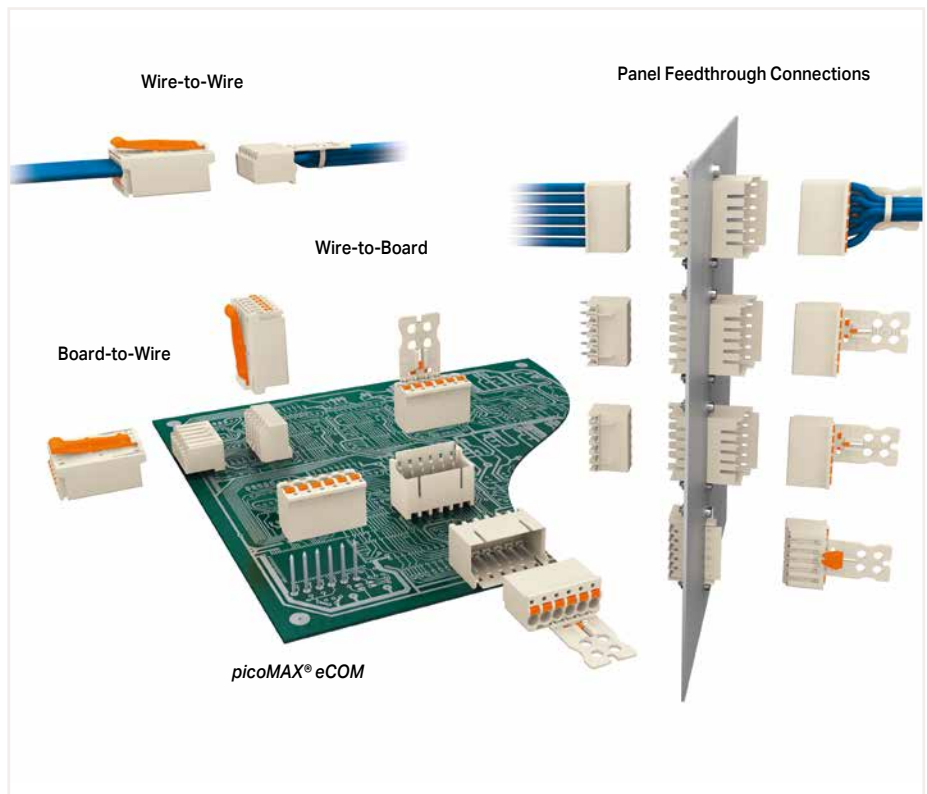
### Description and Installation

3

Inserting a fine-stranded conductor into an unmated female connector via push-button.



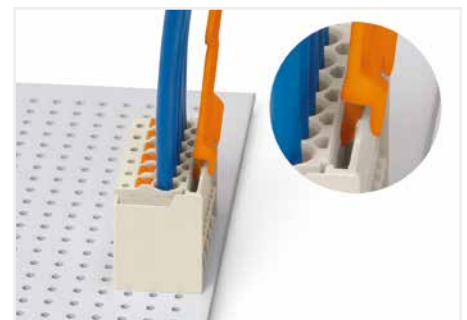
Inserting solid and ferruled conductors via push-in termination.



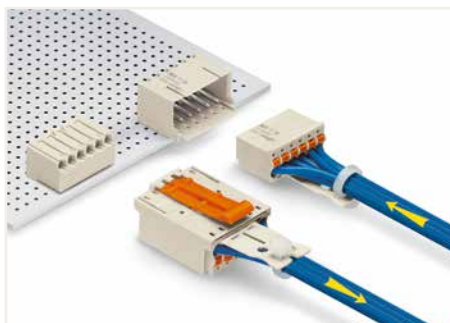
The locking latch of the male header interlocks with the locking latch of the female connector, for a secure connection.



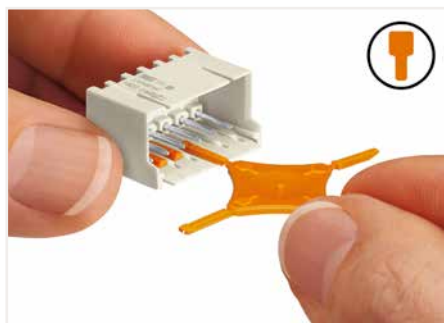
Coding a female connector (via 209x-1610 Coding Key Carrier and two keys for female connector, see symbol).



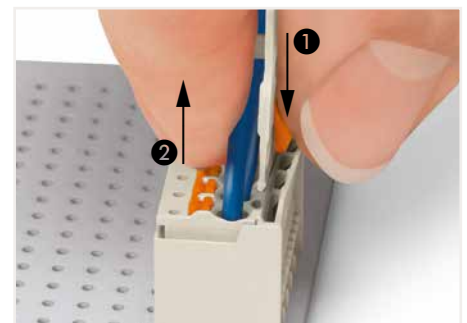
Disconnecting a female connector via unlocking tool. Plug unlocking tool into the male header's locking latch.



Easy-to-identify PCB inputs and outputs



Coding a male header (via 209x-1610 Coding Key Carrier and two keys for male header, see symbol).





















Disconnecting female connector via sliding connector release.

- ➊ Push down sliding connector release (gripping plate) to open the locking latch.
- ➋ Pull out female connector from male header.

picoMAX® Pluggable Connectors

Combination Overview for Male and Female Connectors/Headers

Male Connectors/Headers							
Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
with straight solder pins, 2 ... 12 poles		with angled solder pins, 2 ... 12 poles		for conductor connection, 2 ... 5 poles		for panel feedthrough connections, 2 ... 8 poles Outside	Inside (unlocked)
							
2091-1402	200	2091-1422	200	0.2 ... 2.5 mm² / AWG 24 ... 12			
2091-1412	100	2091-1432	100	2091-1522/002-000	200	2091-1632/024-000	100
				2091-1528/002-000	50	2091-1638/002-000	50
Female Connectors/Headers	for conductor connection, gripping plate and sliding connector release, 2 ... 12 poles					outside	inside
							
	0.2 ... 1.5 mm² / AWG 24 ... 14						
	2091-1102/002-000	100					
	2091-1112/002-000	50					
	for conductor connection, with gripping plate, 2 ... 12 poles					outside	inside
							
	0.2 ... 1.5 mm² / AWG 24 ... 14						
	2091-1102	200					
	2091-1112	100					
	for conductor connection, 2 ... 12 poles					outside	inside
							
	0.2 ... 1.5 mm² / AWG 24 ... 14						
	2091-1122	200					
	2091-1132	100					
	with straight solder pins, 2 ... 8 poles					outside	inside
							
	2091-1302	200					
	2091-1308	100					
	with angled solder pins, 2 ... 8 poles					outside	inside
							
	2091-1322	200					
	2091-1328	100					



Disconnection: Open locking latches via  
unlocking tool (2092-1630).



This combination of male and female  
connectors/headers is allowed.



This combination of male and female  
connectors/headers is not allowed.

All data refers to 3.5 mm pin spacing.

Item numbers for:  
3.5 mm pin spacing    2091-1xxx    (160 V/10 A)  
5 mm pin spacing    2092-1xxx    (320 V/16 A)  
7.5 mm pin spacing    2092-3xxx    (630 V/16 A)



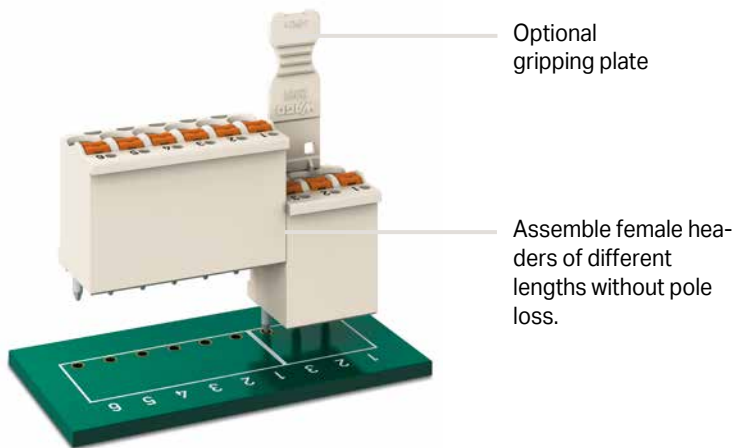
## picoMAX® eCOM Pluggable Connectors

### Description and Installation

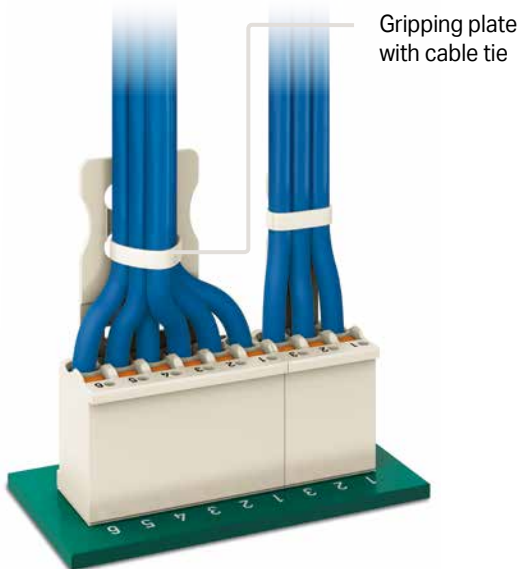
1. Place and solder the pluggable female headers as marked on the PCB.

WAGO's *picoMAX*® eCOM Pluggable Female Headers are delivered with solder pins so they can be directly soldered to a PCB and then wired just as terminal blocks are. Push-in CAGE CLAMP® allows solid, stranded and fine-stranded conductors to be terminated via push-buttons. Solid and ferruled conductors are terminated by simply pushing them into unit. For simplified maintenance, the pluggable female headers can be removed without altering the wiring and then plugged onto the replacement PCB.

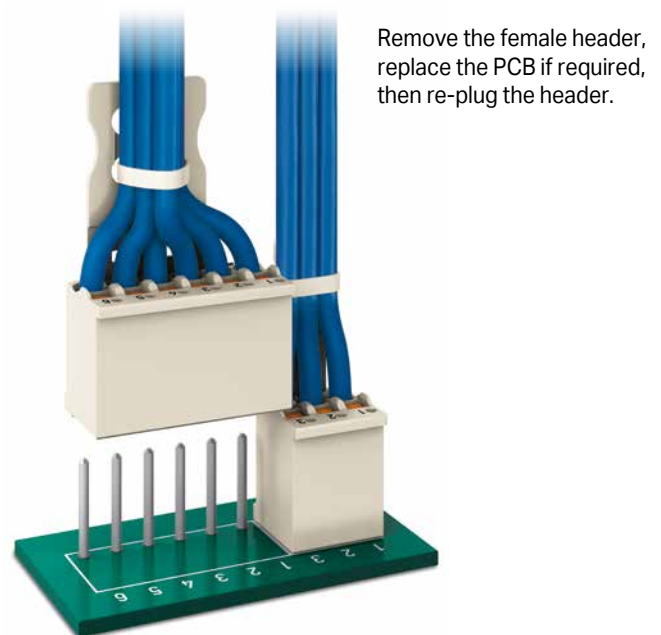
3



2. Wired female headers



3. During maintenance



## picoMAX® eCOM Pluggable Connectors

### System Overview for Standard Female Headers

#### picoMAX® eCOM Pluggable Connectors; Female Connectors/Headers

Pin Spacing 3.5 mm; 2 ... 12 poles

Pin Spacing 5 mm; 2 ... 12 poles

Pin Spacing 7.5 mm; 2 ... 5 poles

Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
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With straight solder pins; without gripping plate

0.2 ... 1.5 mm<sup>2</sup> / AWG 24 ... 14

2091-1172	200
2091-1182	100

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-1172	200
2092-1182	100

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-3172	100
2092-3175	100

With straight solder pins; with gripping plate

0.2 ... 1.5 mm<sup>2</sup> / AWG 24 ... 14

2091-1152	100
2091-1162	50

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-1152	100
2092-1162	50

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-3152	100
2092-3155	100

With angled solder pins; without gripping plate

0.2 ... 1.5 mm<sup>2</sup> / AWG 24 ... 14

2091-1372	200
2091-1382	100

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-1372	200
2092-1382	100

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-3372	100
2092-3375	100

With angled solder pins; with gripping plate

0.2 ... 1.5 mm<sup>2</sup> / AWG 24 ... 14

2091-1352	100
2091-1362	50

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-1352	100
2092-1362	50

0.2 ... 2.5 mm<sup>2</sup> / AWG 24 ... 14

2092-3352	100
2092-3355	100

Gripping plates for field assembly



2091-1600	100
2091-1603	100



2092-1600	100
2092-1603	100



2092-3600	100
2092-3603	100

Gripping plates with sliding connector release for field assembly



2091-1600/002-000	100
2091-1603/002-0	100



2092-1600/002-000	100
2092-1603/002-000	100



2092-3600/002-000	100
2092-3603/002-000	100

#### Accessories

Item No.	Pack. Unit	Item No.	Pack. Unit	Item No.	Pack. Unit
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Operating tool; with a partially insulated shaft; type 1, (2.5 x 0.4) mm blade

Unlocking tool; for female connectors; without gripping plate or sliding connector release

Test pin; 1 mm Ø; with solder connection for test cable

210-719	50
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2092-1630	100
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735-500	1
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## WAGO Field-Wiring Terminal Blocks for Lighting

WAGO Field-Wiring Terminal Blocks for Lighting

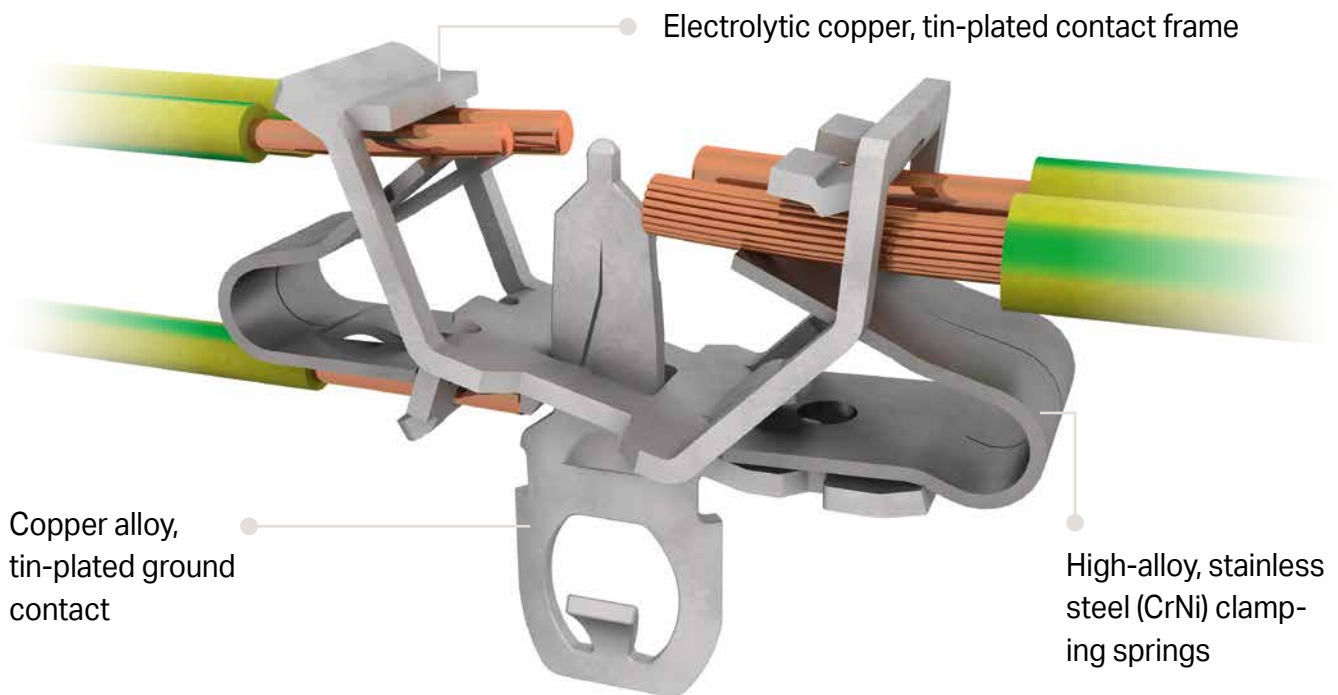
			Page
	Lighting Terminal Blocks	294 Series	118
	Dividable Terminal Strips, Compact Terminal Blocks	272 Series	132
	4-Conductor, Chassis-Mount Terminal Strips	862 Series	138
	Modular Terminal Blocks and Terminal Strips	260 Series 261 Series 262 Series 264 Series	142
	Rail-Mount Terminal Blocks Mini; for DIN-15 and DIN-35 Rails	264 Series	160

## Connect Lighting and Equipment Worldwide

### 294 Series

## Contact Technology

4



**Internal connection:**  
**PUSH WIRE®** for internal wiring with solid conductors

#### EUROPE

1 x 0.5 ... 2.5 mm<sup>2</sup>; "s"

1 x 0.5 ... 1.5 mm<sup>2</sup>; "s"

1 x 0.5 ... 0.75 mm<sup>2</sup>; "s"

#### AMERICA

1 x 18 ... 14 AWG; "s"

1 x 18 ... 16 AWG; "s"

1 x 18 AWG; "s"

#### JAPAN

1 x Ø 0.8 ... 1.6 mm; "s"

1 x Ø 0.8 ... 1.0 mm; "s"

1 x Ø 0.8 mm; "s"

**External connection:**  
**Push-in CAGE CLAMP®** for power supply connections for all conductor types

#### EUROPE

2 x 0.5 ... 2.5 mm<sup>2</sup>; "s; st; f-st"

#### AMERICA

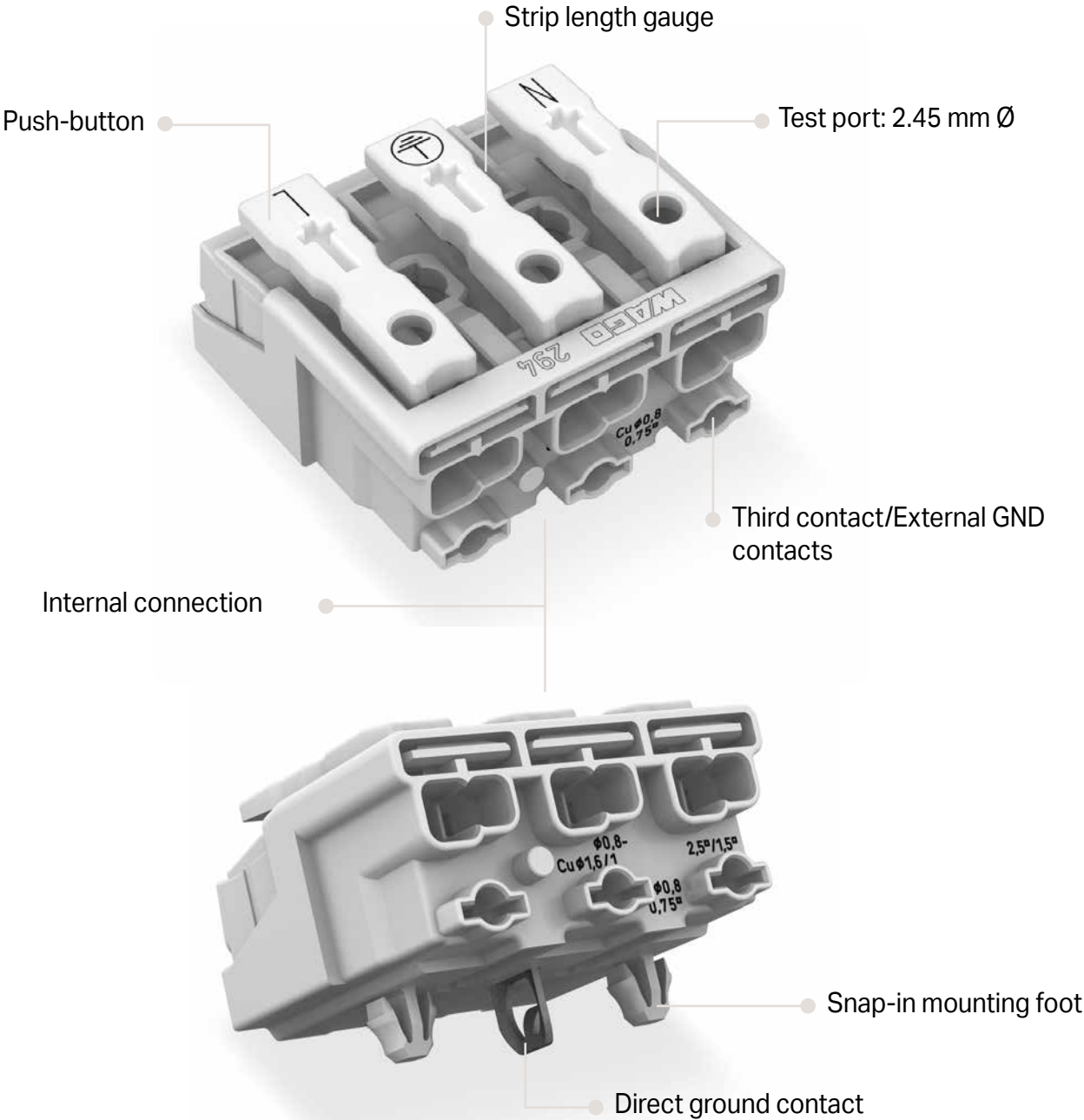
2 x 18 ... 12 AWG; "s"

2 x 18 ... 14 AWG; "st; f-st"

#### JAPAN

2 x Ø 0.8 ... 2.0 mm; "s"












2 x 0.5 ... 2.0 mm<sup>2</sup>; "st; f-st"



## 294 Series with Two Snap-In Mounting Feet

Pole No.	Marking	Without GND contact	With direct GND contact	With screw-type GND contact	With snap-in GND contact	With angled snap-in GND contact
2	plain	294-5002	–	–	–	–
	N L	294-5012	–	–	–	–
	N' L'	294-5022	–	–	–	–
	DA– DA+	294-5032	–	–	–	–
	– +	294-5072	–	–	–	–
	1 N	294-5052	–	–	–	–
	2 1	294-5042	–	–	–	–
3	plain	294-5003	–	–	–	–
	N ⊕ L	294-5013	294-5113	294-5413	294-5213	294-5313
	N' ⊕ L'	294-5023	294-5123	294-5423	294-5223	294-5323
	1 ⊕ N	294-5053	294-5153	294-5453	294-5253	294-5353
	3 2 1	294-5043	–	–	–	–
	N E L	294-5093/3025-000	–	–	–	–
4	plain	294-5004	–	–	–	–
	1/L' 2/L ⊕ N	294-5024	294-5124	294-5424	294-5224	294-5324
	1 2 ⊕ N	294-5014	294-5114	294-5414	294-5214	294-5314
	4 3 2 1	294-5044	–	–	–	–
	1/L' 2/L E N	294-5094/4025-000	–	–	–	–
5	plain	294-5005	–	–	–	–
	L3 L2 L1 ⊕ N	294-5015	–	294-5415	294-5215	294-5315
	L' N' L ⊕ N	294-5025	–	294-5425	294-5225	294-5325
	DA+ DA– L ⊕ N	294-5035	–	294-5435	294-5235	294-5335
	DA– N ⊕ L DA+	294-5075	294-5175	294-5475	294-5275	294-5375
	3 N ⊕ 1 2	294-5055	294-5155	294-5455	294-5255	294-5355
	5 4 3 2 1	294-5045	–	–	–	–
	DA+ DA– L E N	294-5095/5025-000	–	–	–	–
	L3 L2 L1 E N	294-5095/5026-000	–	–	–	–
	L' N' L E N	294-5095/5027-000	–	–	–	–

## 294 Series without Snap-In Mounting Feet

						
Pole No.	Marking	Item No.	Item No.	Item No.	Item No.	Item No.
	plain	294-4002	-	-	-	-
	N L	294-4012	-	-	-	-
	N' L'	294-4022	-	-	-	-
	DA- DA+	294-4032	-	-	-	-
	- +	294-4072	-	-	-	-
	1 N	294-4052	-	-	-	-
	2 1	294-4042	-	-	-	-
	plain	294-4003	-	-	-	-
	N ⊕ L	294-4013	-	294-4413	294-4213	294-4313
	N' ⊕ L'	294-4023	-	294-4423	294-4223	294-4323
	1 ⊕ N	294-4053	-	294-4453	294-4253	294-4353
	3 2 1	294-4043	-	-	-	-
	N E L	294-4093/3025-000	-	-	-	-
	plain	294-4004	-	-	-	-
	1/L' 2/L ⊕ N	294-4024	-	294-4424	294-4224	294-4324
	1 2 ⊕ N	294-4014	-	294-4414	294-4214	294-4314
	4 3 2 1	294-4044	-	-	-	-
	1/L' 2/L E N	294-4094/4025-000	-	-	-	-
	plain	294-4005	-	-	-	-
	L3 L2 L1 ⊕ N	294-4015	-	294-4415	294-4215	294-4315
	L' N' L ⊕ N	294-4025	-	294-4425	294-4225	294-4325
	DA+ DA- L ⊕ N	294-4035	-	294-4435	294-4235	294-4335
	DA- N ⊕ L DA+	294-4075	-	294-4475	294-4275	294-4375
	3 N ⊕ 1 2	294-4055	-	294-4455	294-4255	294-4355
	5 4 3 2 1	294-4045	-	-	-	-
	DA+ DA- L E N	294-4095/5025-000	-	-	-	-
	L3 L2 L1 E N	294-4095/5026-000	-	-	-	-
	L' N' L E N	294-4095/5027-000	-	-	-	-
	plain	294-4006	-	-	-	-
	plain	294-4007	-	-	-	-



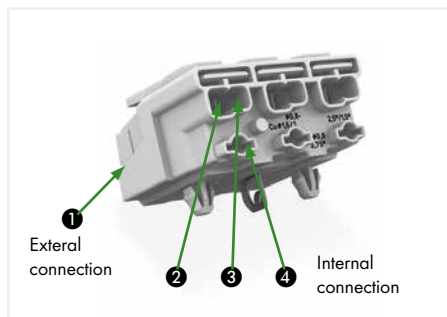
## Field-Wiring Terminal Blocks

### 294 Series



- External connection of solid, stranded and fine-stranded conductors
- Universal conductor termination (AWG, metric)
- Third contact located at the bottom of internal connection end
- Strain relief plate can be retrofitted

4



#### Electrical Data

Ratings per	IEC/EN 60998-1	IEC/EN 60998-2-2
Overvoltage category	III	II
Pollution degree	2	2
Rated voltage	500 V	500 V
Rated surge voltage	4 kV	4 kV
Rated current	24 A	24 A
Temperature specification	T85	T85

#### Connection Data for External Connection

Connection technology	Push-in CAGE CLAMP®
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor range (conductor termination ①)	
Solid, stranded or fine-stranded conductor	2 x 0.5 ... 2.5 mm <sup>2</sup>
Solid, stranded or fine-stranded conductor; with ferrule	2 x 0.5 ... 1.5 mm <sup>2</sup>
Solid conductor (AWG)	2 x 18 ... 12
Fine-stranded and stranded conductor (AWG)	2 x 18 ... 14

#### Connection Data for Internal Connection

Connection technology	PUSH WIRE®
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor range (conductor termination ②)	
Solid conductor	0.5 ... 2.5 mm <sup>2</sup> / 18 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor; with insulated ferrule	0.5 ... 1 mm <sup>2</sup>
Conductor range (conductor termination ③)	
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 18 ... 16 AWG
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with insulated ferrule	0.5 ... 0.75 mm <sup>2</sup>
Conductor range (conductor termination ④)	
Solid conductor	0.5 ... 0.75 mm <sup>2</sup> / 18 AWG

#### Material Data

Material group	IIa
Insulation material	Polycarbonate (PC)
Flammability class per UL94	V0
Temperature stability	Relative Temperature Index (RTI) of 120°C
Processing temperature	-5 ... +40 °C
Storage temperature	-35 ... +85 °C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

16 mm-high versions are available upon request.

# Field-Wiring Terminal Block; 2-Pole 294 Series

Without GND contact



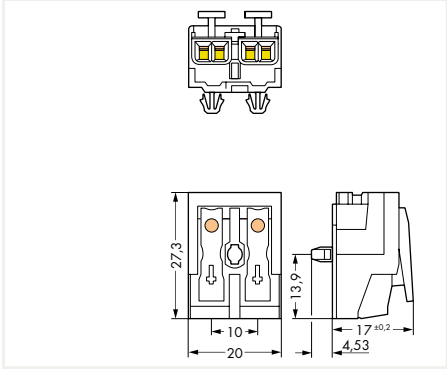
Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
plain	294-5002	1000
N L	294-5012	1000
N' L'	294-5022	1000
DA- DA+	294-5032	1000
- +	294-5072	1000
2 1	294-5042	1000
1 N	294-5052	1000

Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
plain	294-4002	1000
N L	294-4012	1000
N' L'	294-4022	1000
DA- DA+	294-4032	1000
- +	294-4072	1000
2 1	294-4042	1000
1 N	294-4052	1000

Dimensions (in mm):



## Field-Wiring Terminal Block; 3-Pole 294 Series

Without GND contact



With direct GND contact



With screw-type GND contact



Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
plain	294-5003	500
N ⊕ L	294-5013	500
N' ⊕ L'	294-5023	500
1 ⊕ N	294-5053	500
3 2 1	294-5043	500
N E L	294-5093/3025-000	500

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
N ⊕ L	294-5113	500
N' ⊕ L'	294-5123	500
1 ⊕ N	294-5153	500

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
N ⊕ L	294-5413	500
N' ⊕ L'	294-5423	500
1 ⊕ N	294-5453	500

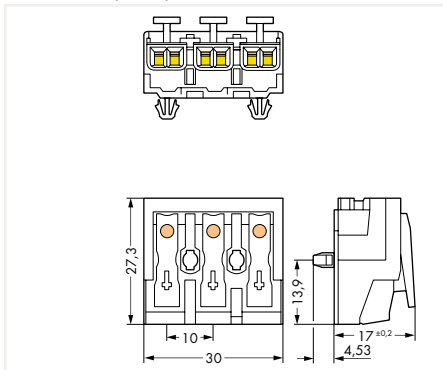
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
plain	294-4003	500
N ⊕ L	294-4013	500
N' ⊕ L'	294-4023	500
1 ⊕ N	294-4053	500
3 2 1	294-4043	500
N E L	294-4093/3025-000	500

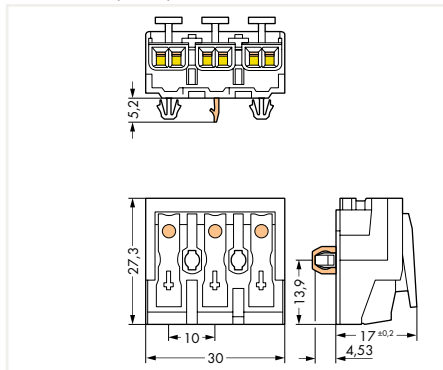
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
N ⊕ L	294-4413	500
N' ⊕ L'	294-4423	500
1 ⊕ N	294-4453	500

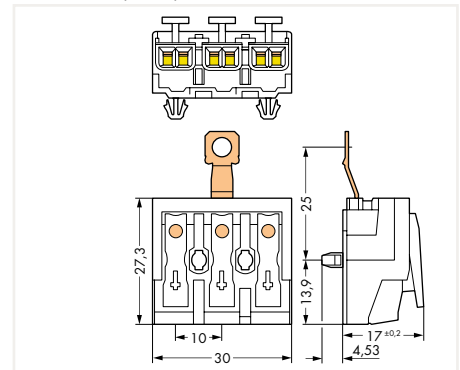
Dimensions (in mm):



Dimensions (in mm):



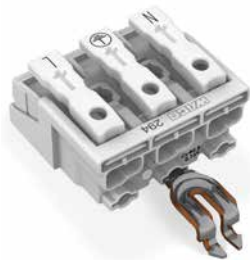
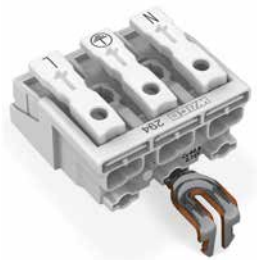
Dimensions (in mm):



# Field-Wiring Terminal Block; 3-Pole 294 Series

With snap-in GND contact

With angled snap-in GND contact



Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
N ⊕ L	294-5213	500
N' ⊕ L'	294-5223	500
1 ⊕ N	294-5253	500

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
N ⊕ L	294-5313	500
N' ⊕ L'	294-5323	500
1 ⊕ N	294-5353	500

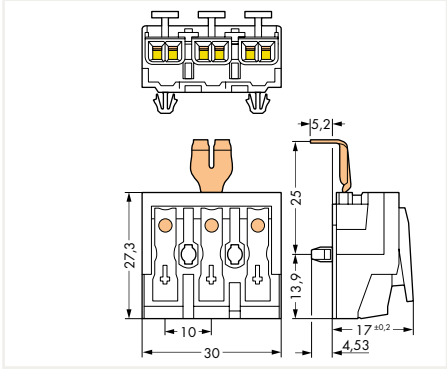
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
N ⊕ L	294-4213	500
N' ⊕ L'	294-4223	500
1 ⊕ N	294-4253	500

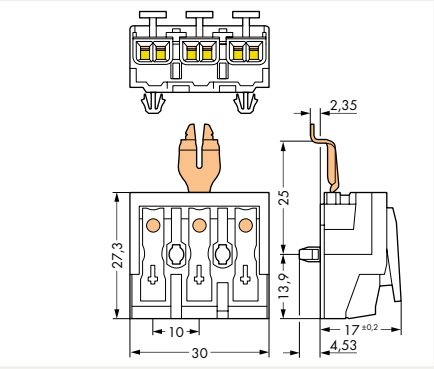
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
N ⊕ L	294-4313	500
N' ⊕ L'	294-4323	500
1 ⊕ N	294-4353	500

Dimensions (in mm):



Dimensions (in mm):



## Field-Wiring Terminal Block; 4-Pole 294 Series

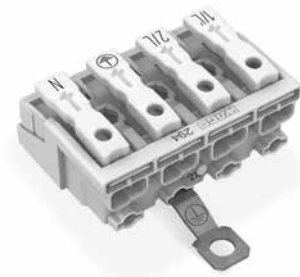
Without GND contact



With direct GND contact



With screw-type GND contact



Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
plain	294-5004	500
1/L' 2/L ⊕ N	294-5024	500
1 2 ⊕ N	294-5014	500
4 3 2 1	294-5044	500
1/L' 2/L E N	294-5094/4025-000	500

Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
plain	294-4004	500
1/L' 2/L ⊕ N	294-4024	500
1 2 ⊕ N	294-4014	500
4 3 2 1	294-4044	500
1/L' 2/L E N	294-4094/4025-000	500

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
1/L' 2/L ⊕ N	294-5124	500
1 2 ⊕ N	294-5114	500

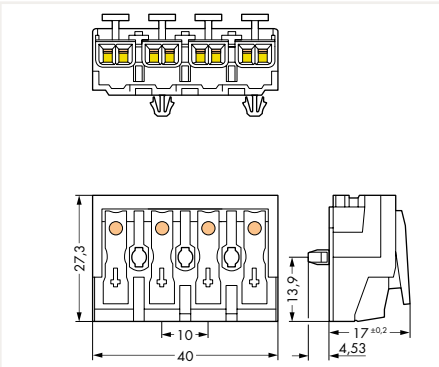
Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
1/L' 2/L ⊕ N	294-5424	500
1 2 ⊕ N	294-5414	500

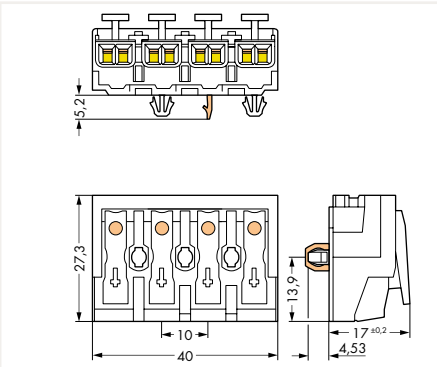
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
1/L' 2/L ⊕ N	294-4424	500
1 2 ⊕ N	294-4414	500

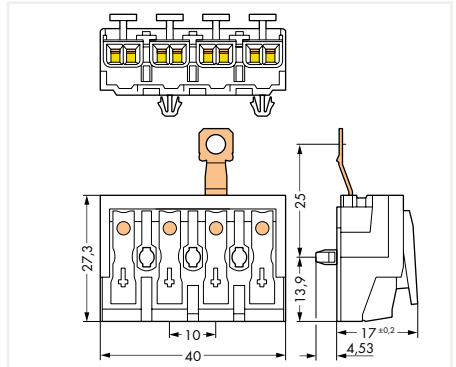
Dimensions (in mm):



Dimensions (in mm):

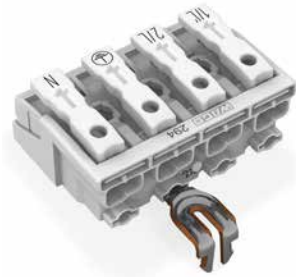


Dimensions (in mm):

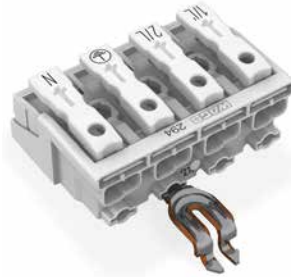


Field-Wiring Terminal Block; 4-Pole  
294 Series

With snap-in GND contact



With angled snap-in GND contact



Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
1/L' 2/L ⊕ N	294-5224	500
1 2 ⊕ N	294-5214	500

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
1/L' 2/L ⊕ N	294-5324	500
1 2 ⊕ N	294-5314	500

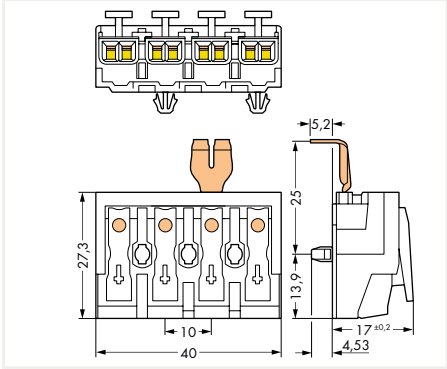
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
1/L' 2/L ⊕ N	294-4224	500
1 2 ⊕ N	294-4214	500

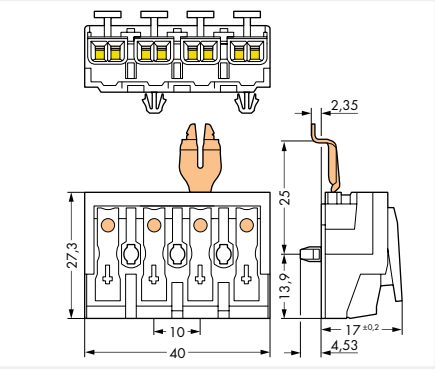
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
N ⊕ L	294-4324	500
N' ⊕ L'	294-4314	500

Dimensions (in mm):



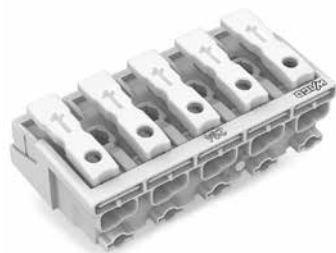
Dimensions (in mm):





## Field-Wiring Terminal Block; 5-Pole 294 Series

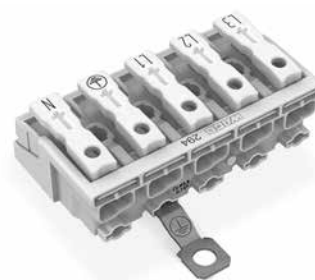
Without GND contact



With direct GND contact



With screw-type GND contact



Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
plain	294-5005	250
L3 L2 L1 ⊕ N	294-5015	250
L' N' L ⊕ N	294-5025	250
DA+ DA- L ⊕ N	294-5035	250
DA- N ⊕ L DA+	294-5075	250
3 N ⊕ 1 2	294-5055	250
5 4 3 2 1	294-5045	250
DA+ DA- L E N	294-5095/5025-000	250
L3 L2 L1 E N	294-5095/5026-000	250
L' N' L E N	294-5095/5027-000	250

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
DA- N ⊕ L DA+	294-5175	250
3 N ⊕ 1 2	294-5155	250

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
L3 L2 L1 ⊕ N	294-5415	250
L' N' L ⊕ N	294-5425	250
DA+ DA- L ⊕ N	294-5435	250
DA- N ⊕ L DA+	294-5475	250
3 N ⊕ 1 2	294-5455	250

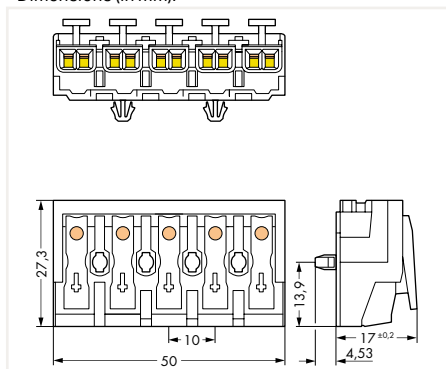
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
plain	294-4005	250
L3 L2 L1 ⊕ N	294-4015	250
L' N' L ⊕ N	294-4025	250
DA+ DA- L ⊕ N	294-4035	250
DA- N ⊕ L DA+	294-4075	250
3 N ⊕ 1 2	294-4055	250
5 4 3 2 1	294-4045	250
DA+ DA- L E N	294-4095/5025-000	250
L3 L2 L1 E N	294-4095/5026-000	250
L' N' L E N	294-4095/5027-000	250

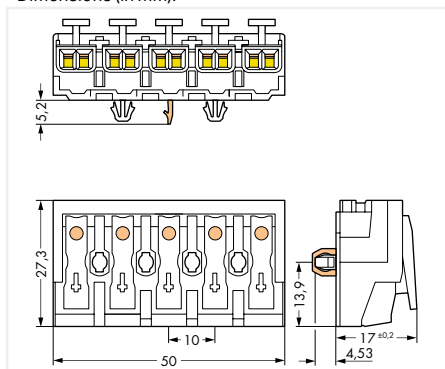
Versions without snap-in mounting feet

Marking	Item No.	Pack. Unit
L3 L2 L1 ⊕ N	294-4415	250
L' N' L ⊕ N	294-4425	250
DA+ DA- L ⊕ N	294-4435	250
DA- N ⊕ L DA+	294-4475	250
3 N ⊕ 1 2	294-4455	250

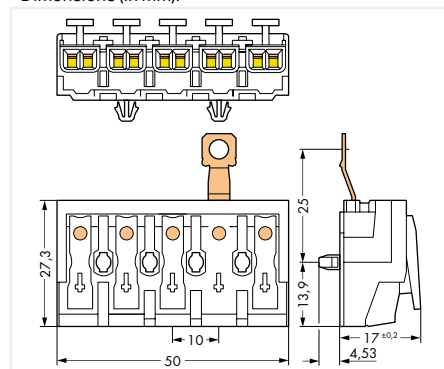
Dimensions (in mm):



Dimensions (in mm):

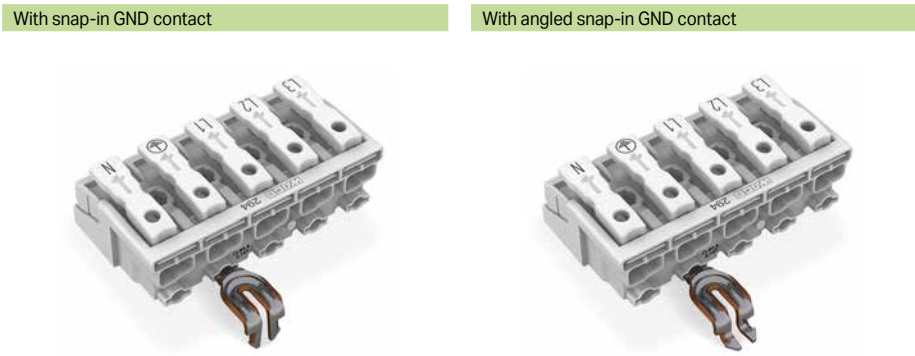


Dimensions (in mm):



# Field-Wiring Terminal Block; 5-Pole

## 294 Series



Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
L3 L2 L1 ⊕ N	294-5215	250
L' N' L ⊕ N	294-5225	250
DA+ DA- L ⊕ N	294-5235	250
DA- N ⊕ L DA+	294-5275	250
3 N ⊕ 1 2	294-5255	250

Versions without snap-in mounting feet

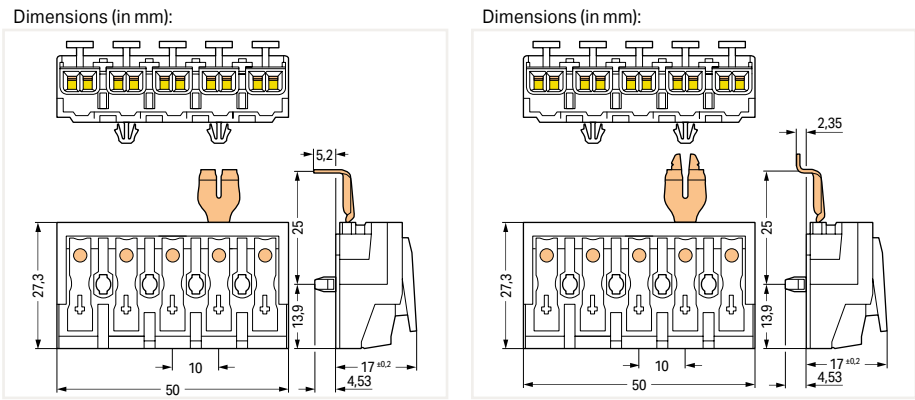
Marking	Item No.	Pack. Unit
L3 L2 L1 ⊕ N	294-4215	250
L' N' L ⊕ N	294-4225	250
DA+ DA- L ⊕ N	294-4235	250
DA- N ⊕ L DA+	294-4275	250
3 N ⊕ 1 2	294-4255	250

Versions with snap-in mounting feet:

Marking	Item No.	Pack. Unit
L3 L2 L1 ⊕ N	294-5315	250
L' N' L ⊕ N	294-5325	250
DA+ DA- L ⊕ N	294-5335	250
DA- N ⊕ L DA+	294-5375	250
3 N ⊕ 1 2	294-5355	250

Versions without snap-in mounting feet

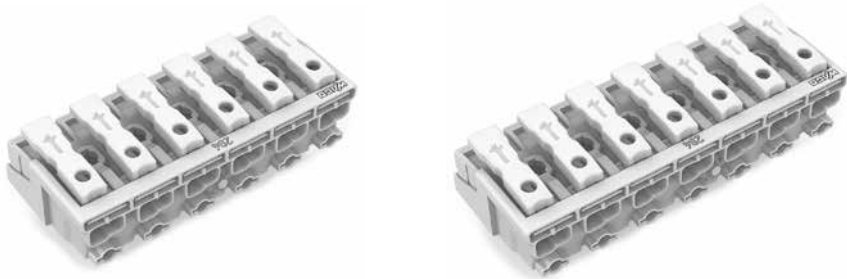
Marking	Item No.	Pack. Unit
L3 L2 L1 ⊕ N	294-4315	250
L' N' L ⊕ N	294-4325	250
DA+ DA- L ⊕ N	294-4335	250
DA- N ⊕ L DA+	294-4375	250
3 N ⊕ 1 2	294-4355	250



# Field-Wiring Terminal Block; 6- and 7-Pole

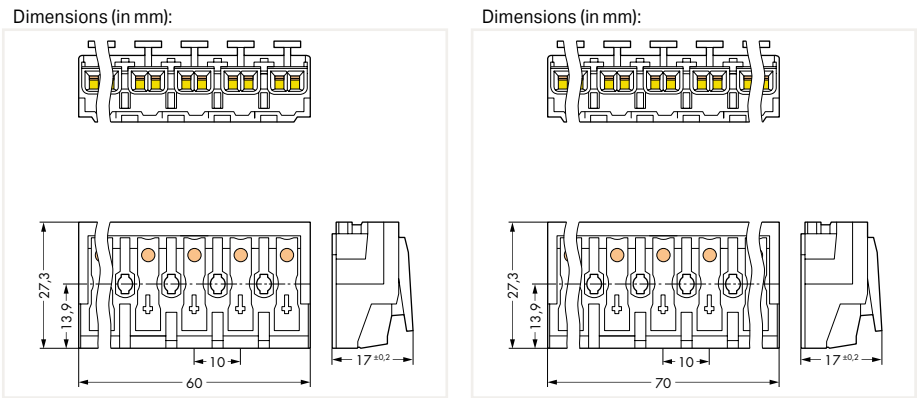
## 294 Series

- 6-pole; without GND contact
- 7-pole; without direct GND contact



4

Versions without snap-in mounting feet			Versions without snap-in mounting feet		
Marking	Item No.	Pack. Unit	Marking	Item No.	Pack. Unit
plain	294-4006	200	plain	294-4007	200



Accessories  
294 Series



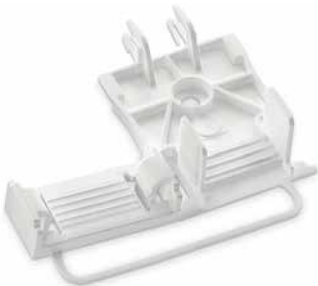
Strain relief plate; for multicore cable: 1 x 5.2 ... 12 mm outer diameter		
Color	Item No.	Pack. Unit
○ white	294-364	50



Strain relief; with snap-in mounting feet; for 4.5 ... 12 mm cable diameter		
Color	Item No.	Pack. Unit
○ white	294-370	500



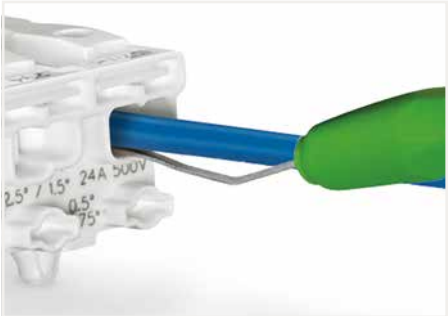
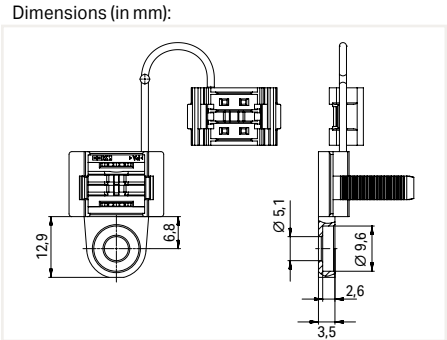
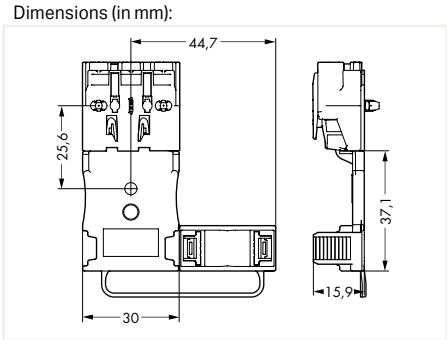
Disconnection tool; removes conductors from PUSH WIRE® connections; for 294 Series		
	Item No.	Pack. Unit
	206-294	1



Strain relief plate; for single strands: min. 3 x 0.5 mm², max. 5 x 2.5 mm² or 7 x 1.5 mm²		
Color	Item No.	Pack. Unit
○ white	294-384	1



Strain relief; for screw/rivet mounting; for 4.5 ... 12 mm cable diameter		
Color	Item No.	Pack. Unit
○ white	294-375	500



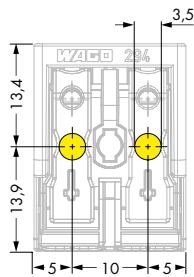
Conductor removal: Slide disconnection tool beneath the conductor and pull conductor out.

## Drilled-Hole Patterns for Snap-In Mounting Feet

### 294 Series

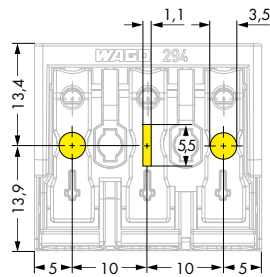
#### 2-pole; without GND contact

Dimensions (in mm):



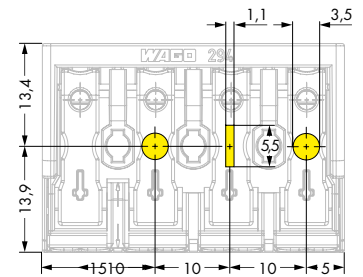
#### 3-pole; with direct GND contact

Dimensions (in mm):



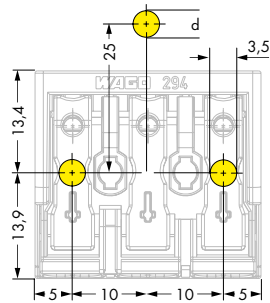
#### 4-pole; with direct GND contact

Dimensions (in mm):



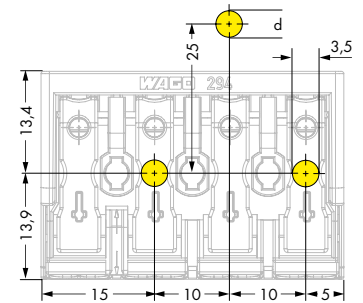
#### 3-pole; with snap-in GND contact (d = 4.9 mm); with screw-type GND contact (d ≤ 4.1 mm)

Dimensions (in mm):



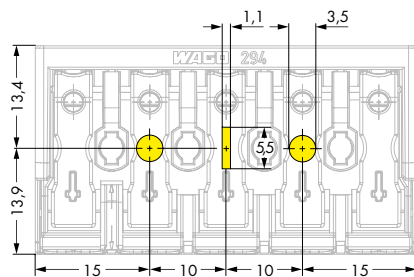
#### 4-pole; with snap-in GND contact (d = 4.9 mm); with screw-type GND contact (d ≤ 4.1 mm)

Dimensions (in mm):



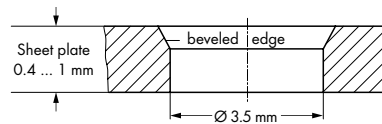
#### 5-pole; with direct GND contact

Dimensions (in mm):



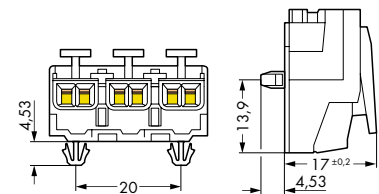
#### Drilled hole for snap-in mounting foot

Dimensions (in mm):



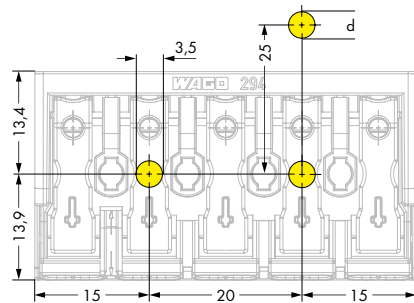
#### Snap-in mounting foot

Dimensions (in mm):



#### 5-pole; with snap-in GND contact (d = 4.9 mm); with screw-type GND contact (d ≤ 4.1 mm)

Dimensions (in mm):

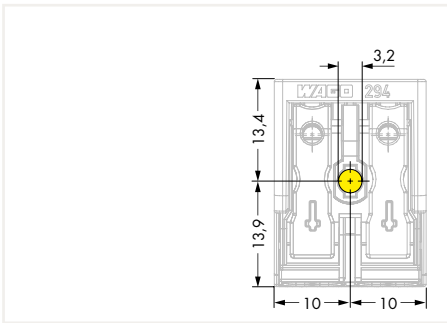


# Drilled-Hole Patterns for Screw Mounting

## 294 Series

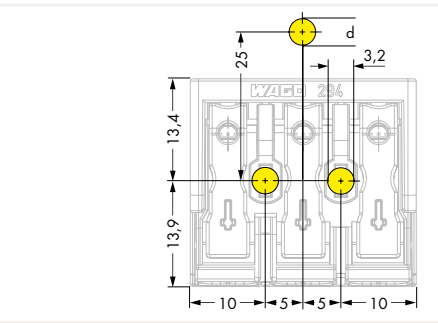
2-pole; without GND contact

Dimensions (in mm):



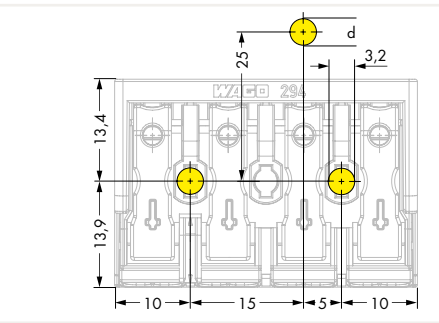
3-pole; with snap-in GND contact (d = 4.9 mm); with screw-type GND contact (d ≤ 4.1 mm)

Dimensions (in mm):



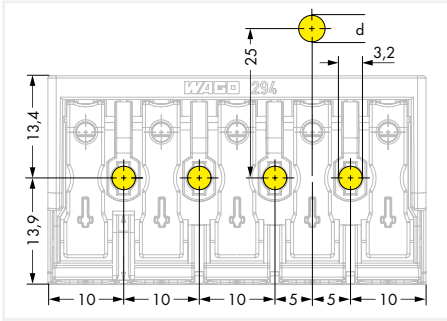
4-pole; with snap-in GND contact (d = 4.9 mm); with screw-type GND contact (d ≤ 4.1 mm)

Dimensions (in mm):



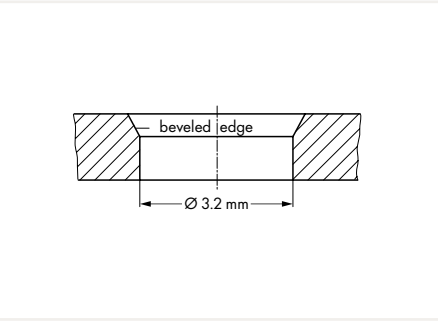
5-pole; with snap-in GND contact (d = 4.9 mm); with screw-type GND contact (d ≤ 4.1 mm)

Dimensions (in mm):



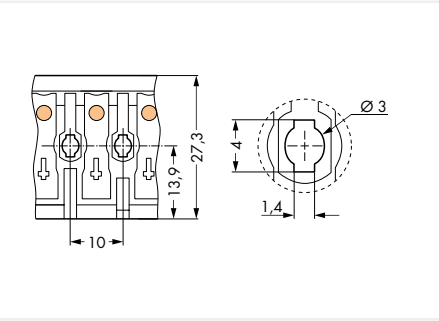
Hole for screw mount

Dimensions (in mm):



Mounting hole for screw

Dimensions (in mm):




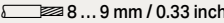
Notice: The maximum thread diameter for self-tapping screws is 3.0 mm.  
Drilled-hole patterns at 1:1 scale




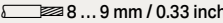
## Dividable Terminal Strip

### 272 Series

#### Technical Data

2 x 0.5 ... 1.5 mm <sup>2</sup> "s"	2 x 20 ... 16 AWG sol.*
2 x 0.5 ... 2.5 mm <sup>2</sup> "s"	2 x 20 ... 14 AWG sol.**
380 V~, size B	300 V, 10 A 
I <sub>N</sub> 18 A	300 V Ⓢ
 8 ... 9 mm / 0.33 inch	

#### Technical Data

2 x 0.5 ... 1.5 mm <sup>2</sup> "s"	2 x 20 ... 16 AWG sol.*
2 x 0.5 ... 2.5 mm <sup>2</sup> "s"	2 x 20 ... 14 AWG sol.**
380 V~, size B	300 V, 10 A 
I <sub>N</sub> 18 A	300 V Ⓢ
 8 ... 9 mm / 0.33 inch	

Dividable terminal strips; with additional push-wire connection for 0.5/0.75 mm<sup>2</sup> H07V-U (NYA) per pole; for screw or screwless mounting (WAGO pins); ground contact, for screw/rivet or snap-in contact (pluggable)

- \* Gray terminal block side
- \*\* White terminal block side
- » ❶ For tool-free mounting
- » ❷ For wiring on white terminal block side only
- » ❸ Factory-assembled ground contacts; (please indicate position when ordering)



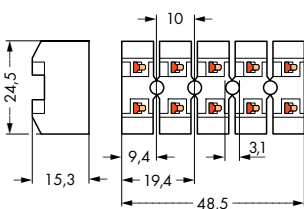
#### Terminal strip; without push-buttons; white

Pole No.	Item No.	Pack. Unit
1	272-101	1000
2	272-102	1000
3	272-103	500
4	272-104	500
5	272-105	500
12	272-112	40
With screw-type GND contact ❸		
3	272-103/1xx-00	500
4	272-104/1xx-00	500
5	272-105/1xx-00	500
With snap-in GND contact ❸		
3	272-103/2xx-00	500
4	272-104/2xx-00	500
5	272-105/2xx-00	500

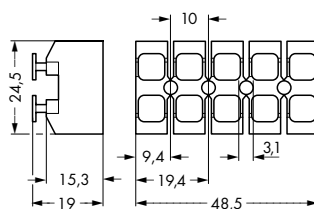
#### Terminal strip; with push-buttons on both sides; white

Pole No.	Item No.	Pack. Unit
1	272-301	500
2	272-302	500
3	272-303	500
4	272-304	500
5	272-305	500
12	272-312	40
With screw-type GND contact ❸		
3	272-303/1xx-00	500
4	272-304/1xx-00	500
5	272-305/1xx-00	500
With snap-in GND contact ❸		
3	272-303/2xx-00	500
4	272-304/2xx-00	500
5	272-305/2xx-00	500

Dimensions (in mm):



Dimensions (in mm):



#### Accessories

##### Connecting pin; for plate thickness:

 1 mm	271-702	1000
1 mm ❶	271-711	1000
1.5 mm ❶	271-712	1000


##### Push-button; loose; for retrofit

 271-120	1000
---	------

##### Assembly tool; for terminal blocks with GND contact

 249-100	1
---	---

##### Felt-tip pen; for direct, permanent manual marking

 210-110	1
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Dividable Terminal Strip

272 Series

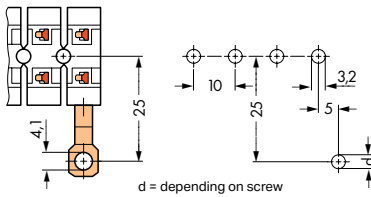
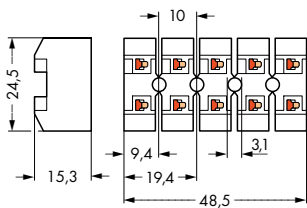
Technical Data	
2 x 0.5 ... 1.5 mm² "s"	2 x 20 ... 16 AWG sol.*
2 x 0.5 ... 2.5 mm² "s"	2 x 20 ... 14 AWG sol.**
380 V~, size B	300 V, 10 A
I <sub>N</sub> 18 A	300 V ☉
8 ... 9 mm / 0.33 inch	



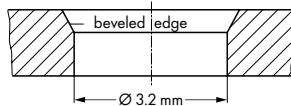
Terminal strip; with standard marking; without push-buttons; white			
Pole No.	Marking	Item No.	Pack. Unit
1	L1, N	272-102/001-000	1000
2	☉, N, L1	272-103/001-000	1000
3	☉, N, L1, L2	272-104/001-000	500
4	☉, N, L1, L2, L3	272-105/001-000	500

- Item number examples for a 3-pole terminal strip without push-buttons:
- a) Without marking:  
Without GND contact 272-103
- b) With printing ☉; N; L1:  
Without GND contact 272-103/001-000  
With snap-in GND contact 272-103/201-000  
With screw-type GND contact 272-103/101-000

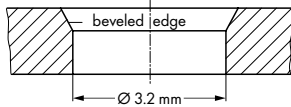
Dimensions (in mm):



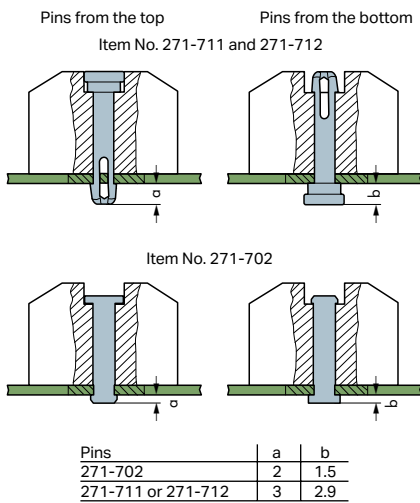
Mounting holes for GND contacts  
(GND contact for screw/rivet mounting)



Mounting holes for GND contacts  
(snap-in GND contact)



Mounting holes for pins






Screwless mounting with pins




## Dividable Terminal Strip

### 272 Series

#### Technical Data







1 x 0.5 ... 0.75 mm <sup>2</sup> "s"	1 x 20 ... 18 AWG sol.*
1 x 0.5 ... 2.5 mm <sup>2</sup> "s"	1 x 20 ... 14 AWG sol.*
2 x 0.5 ... 2.5 mm <sup>2</sup> "s"	2 x 20 ... 14 AWG sol.**
380 V~, size B; I <sub>N</sub> 18 A	300 V  ; 300 V 
 8 ... 9 mm / 0.33 inch	

#### Technical Data







1 x 0.5 ... 0.75 mm <sup>2</sup> "s"	1 x 20 ... 18 AWG sol.*
1 x 0.5 ... 2.5 mm <sup>2</sup> "s"	1 x 20 ... 14 AWG sol.*
2 x 0.5 ... 2.5 mm <sup>2</sup> "s"	2 x 20 ... 14 AWG sol.**
380 V~, size B; I <sub>N</sub> 18 A	300 V  ; 300 V 
 8 ... 9 mm / 0.33 inch	



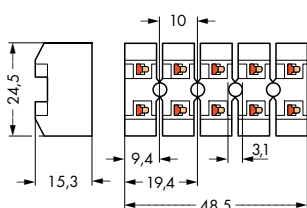
#### Terminal strip; without push-buttons; white

Pole No.	Item No.	Pack. Unit
1	272-581	1000
2 	272-582	1000
3 	272-583	500
4 	272-584	500
5 	272-585	500
12	272-592	40
With screw-type GND contact 		
3	272-583/1xx-00	500
4	272-584/1xx-00	500
5	272-585/1xx-00	500
With snap-in GND contact 		
3	272-583/2xx-00	500
4	272-584/2xx-00	500
5	272-585/2xx-00	500

#### Terminal strip; with snap-in mounting foot; white

Pole No.	Item No.	Pack. Unit
1	272-681	500
2 	272-682	500
3 	272-683	500
4 	272-684	500
5 	272-685	500
12	272-692	40
With screw-type GND contact 		
3	272-683/1xx-00	500
4	272-684/1xx-00	500
5	272-685/1xx-00	500
With snap-in GND contact 		
3	272-683/2xx-00	500
4	272-684/2xx-00	500
5	272-685/2xx-00	500

Dimensions (in mm):

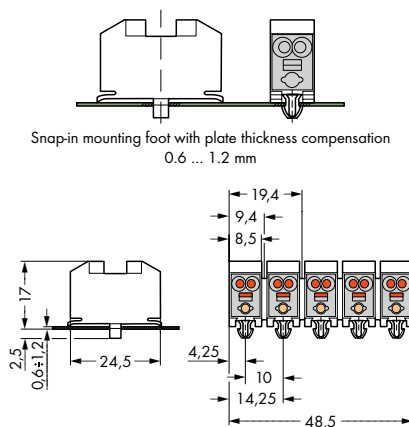


#### Item-Specific Accessories

##### Connecting pin; for plate thickness:


	1 mm	271-702	1000
	1 mm 	271-711	1000
	1.5 mm 	271-712	1000



Dimensions (in mm):





Dividable terminal strips; with additional push-wire connection for 0.5/0.75 mm<sup>2</sup> H07V-U (NYA) per pole; for screw or screwless mounting (WAGO pins); with snap-in mounting foot for mounting holes 3.5 mm Ø, mounting plate 0.6 ... 1.2 mm thick; ground contact, for screw/rivet or snap-in contact (pluggable)

\* Gray terminal block side  
» \*\* White terminal block side

»  Item no. suffix for standard printings: 001-000

»   For tool-free mounting

»   Factory-assembled ground contacts; (please indicate position when ordering)

#### Accessories

##### Push-button; loose; for retrofit



271-120 1000

##### Assembly tool; for terminal blocks with GND contact



249-100 1




##### Felt-tip pen; for direct, permanent manual marking



210-110 1




## Dividable Terminal Strip, Compact Terminal Block 272 Series

### Technical Data

2 x 0.5 ... 1.5 mm <sup>2</sup> "s"	2 x 20 ... 16 AWG sol.*
2 x 0.5 ... 2.5 mm <sup>2</sup> "s"	2 x 20 ... 14 AWG sol.**
380 V~, size B	300 V, 10 A 
I <sub>N</sub> 18 A	300 V 
 8 ... 9 mm / 0.33 inch	









### Technical Data

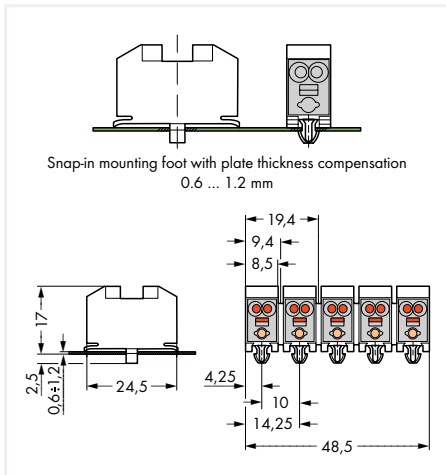
2 x 0.5 ... 1.5 mm <sup>2</sup> "s"	2 x 20 ... 16 AWG sol.*
380 V~, size B	300 V, 10 A 
I <sub>N</sub> 26 A	300 V 
 8 ... 9 mm / 0.33 inch	




### Terminal strip; with snap-in mounting foot; white

Pole No.	Item No.	Pack. Unit
1	272-131	500
2 	272-132	500
3 	272-133	500
4 	272-134	500
5 	272-135	500
12	272-142	40
With screw-type GND contact 		
3	272-133/1xx-00	500
4	272-134/1xx-00	500
5	272-135/1xx-00	500
With snap-in GND contact 		
3	272-133/2xx-00	500
4	272-134/2xx-00	500
5	272-135/2xx-00	500

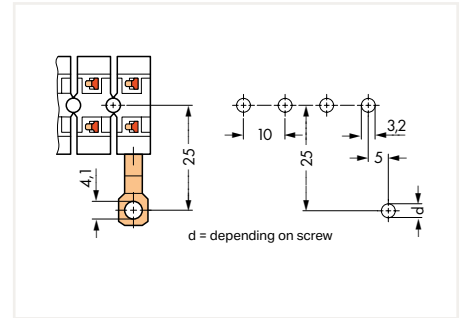
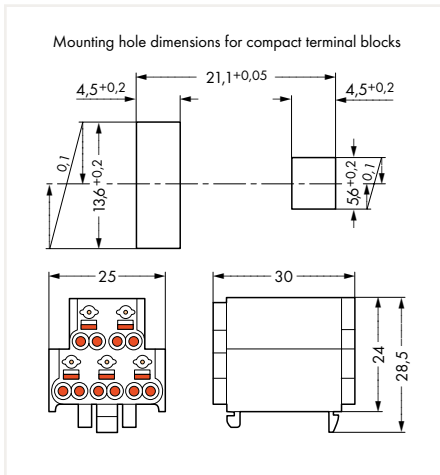
Dimensions (in mm):



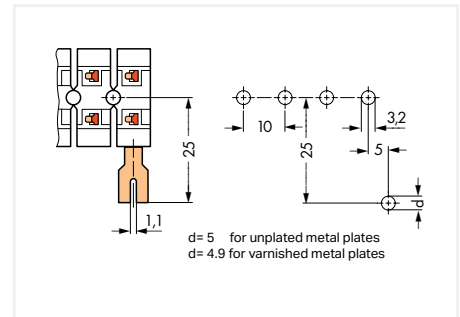
### Compact terminal block; with snap-in mounting feet; white; for cutouts; plate thickness up to 1 mm; with additional push-wire connection for 0.5/0.75 mm<sup>2</sup> H07 V-U (NYA) per pole

Pole No.	Item No.	Pack. Unit
5	272-122	500
With printing: L1; L2 (upper level); L3; N;  (lower level)		
5	272-122/001-00	500

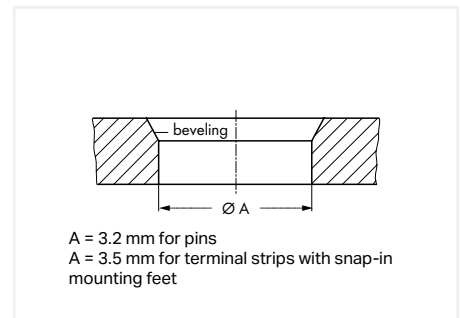
Dimensions (in mm):



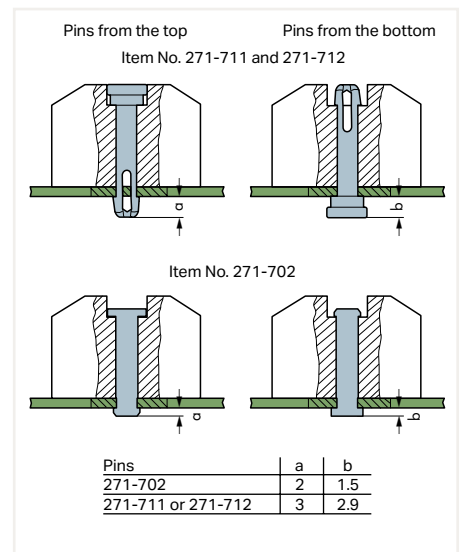
Mounting holes for GND contacts  
(GND contact for screw/rivet mounting)



Mounting holes for GND contacts  
(snap-in GND contact)



Mounting holes for pins

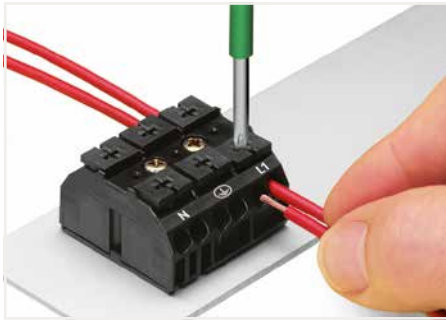


Screwless mounting with pins

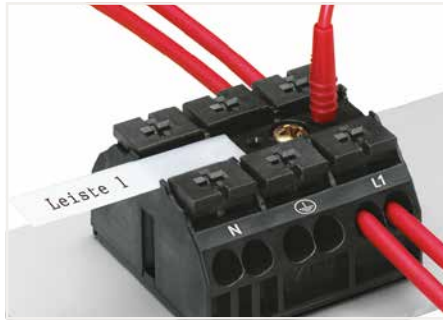
## 4-Conductor Chassis-Mount Terminal Strips

### Description and Installation

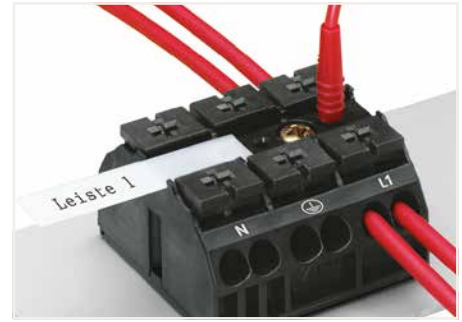
#### 862 Series



Terminating four conductors per pole – solid and fine-stranded.



Marking by direct, one-side printing or marking strips



Testing with a 2 mm Ø test plug.

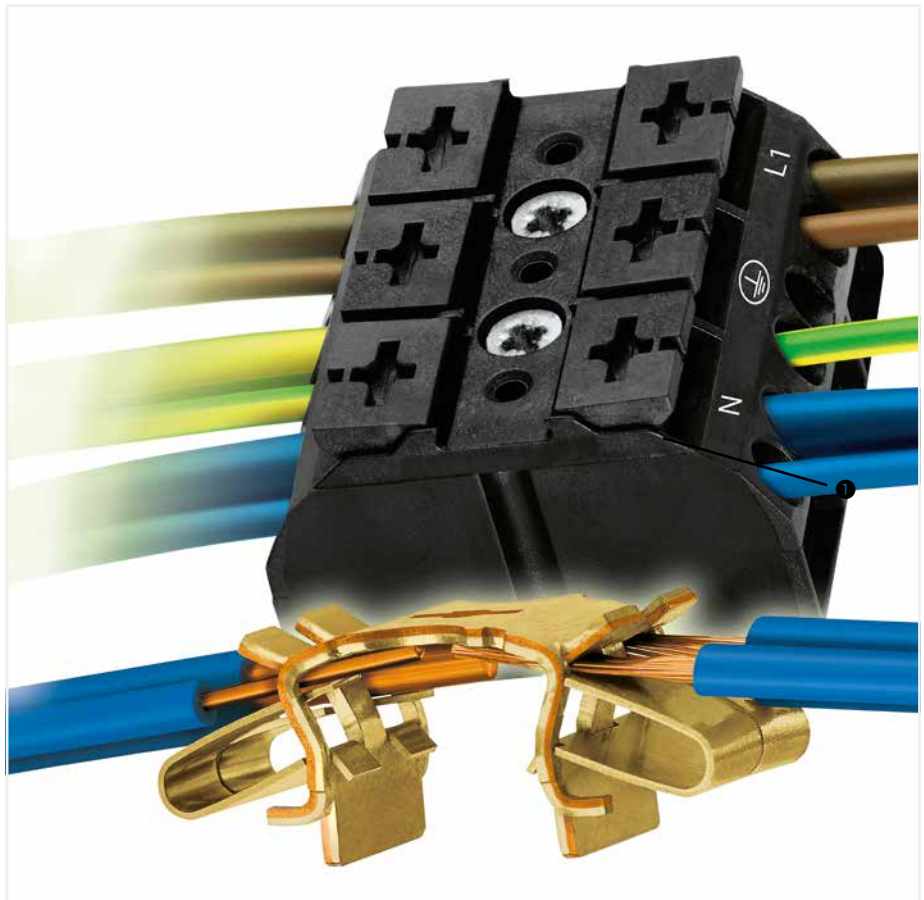
4



Makes an automatic contact to the mounting plate. The plate's varnish is instantly penetrated.



Commoning with comb-style jumper bar.



#### Cost-effective features:

WAGO's 862 Series Chassis-Mount Terminal Strips were developed specifically to minimize wiring costs, while accommodating requirements for flexible mounting, multiple connection points and easy handling:

- Equipped with Push-in CAGE CLAMP®, the 862 Series connects up to four conductors sized 0.5 to 4 mm<sup>2</sup> (20–12 AWG). Due to multiple connection points per pole, different conductor sizes can be used within the same terminal block position.
- For factory wiring, Push-in CAGE CLAMP® Connection

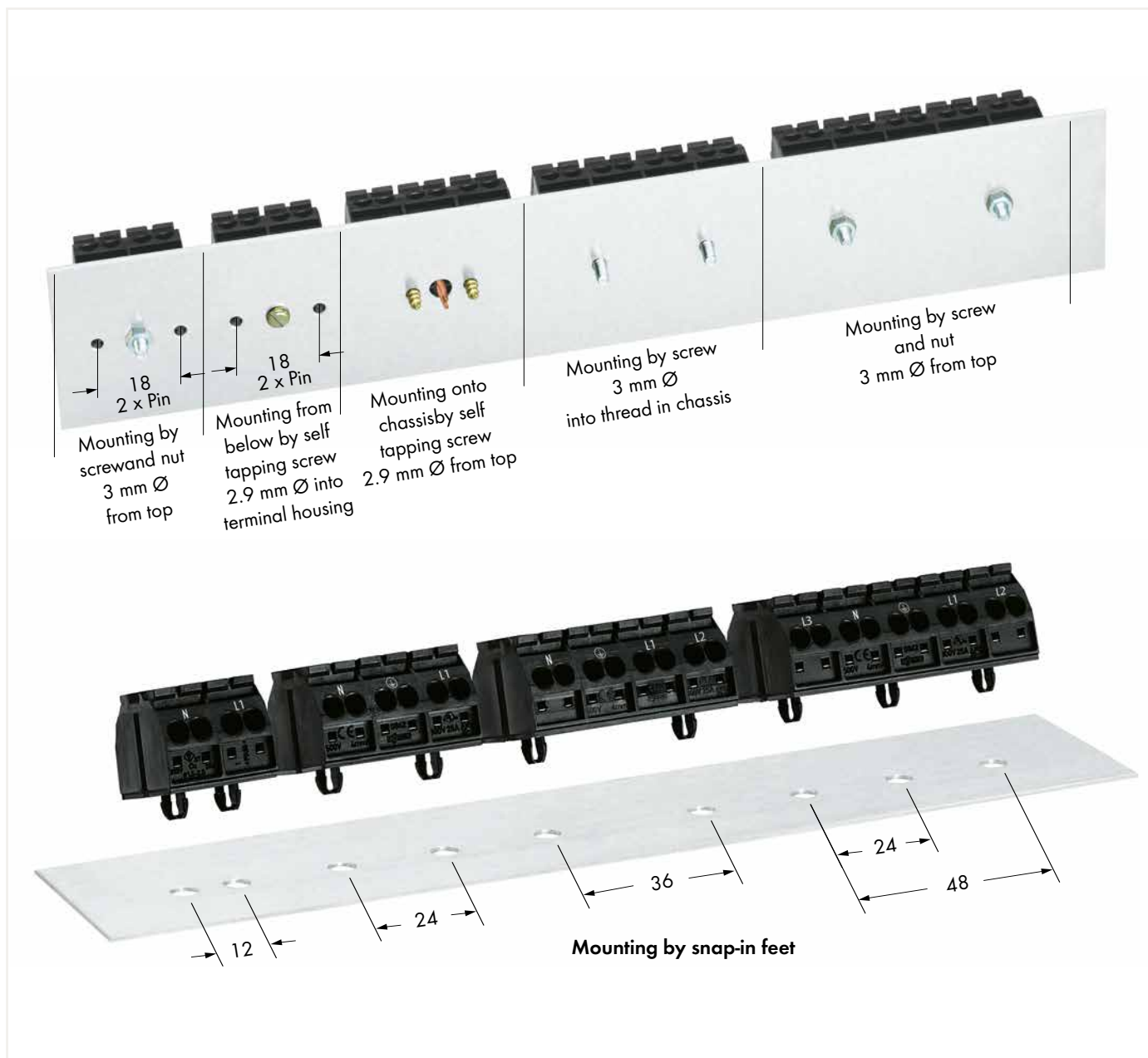
Technology allows solid conductors, fine-stranded conductors with ferrules or ultrasonically bonded conductors from 0.5 to 4 mm<sup>2</sup> (20–12 AWG) to be terminated by simply pushing them into unit (length of bonded conductor end: min. 10 mm).

- Convenient automatic grounding contact optional
- Snap-in mounting feet for fast assembly
- Push-buttons for easy installation with an operating tool or by hand
- Built-in test points simplify testing with 2 mm Ø test plug
- Flexible marking options with standard marking (pre-marked), marking strip or custom marked for large orders

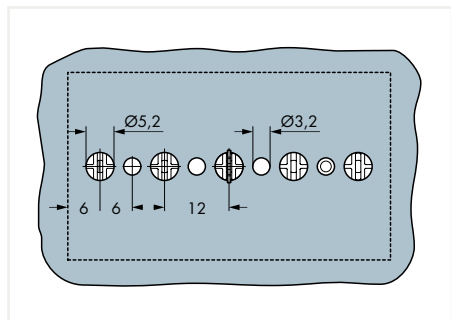
## 4-Conductor Chassis-Mount Terminal Strips

### Mounting Types

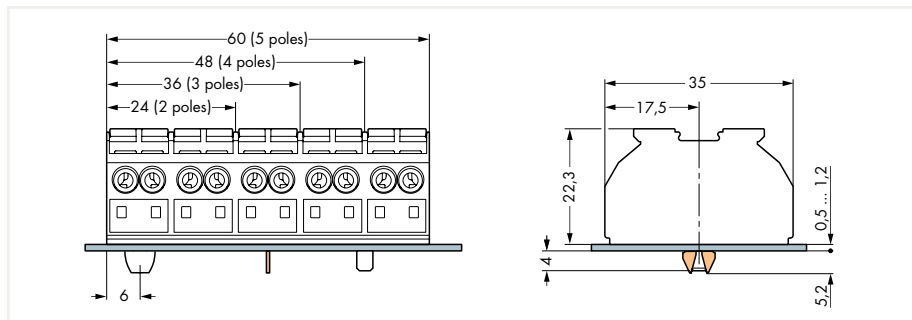
#### 862 Series



Dimensions (in mm):



Dimensions (in mm) for GND contact and snap-in mounting foot ( $\varnothing 5.2$  mm)



Dimensions (in mm) for chassis-mount terminal strips





## 4-Conductor Chassis-Mount Terminal Strip; 4- and 5-Pole; 4 mm<sup>2</sup> 862 Series



Technical Data	
0.5 ... 4 mm <sup>2</sup>	20 ... 12 AWG
500 V/6 kV/3	300 V, 20 A
I <sub>N</sub> 32 A	300 V, 20 A
Module width: 5.2 mm / 0.205 inch	
10 ... 11 mm / 0.39 ... 0.41 inch	

Technical Data	
0.5 ... 4 mm <sup>2</sup>	20 ... 12 AWG
500 V/6 kV/3	300 V, 20 A
I <sub>N</sub> 32 A	300 V, 20 A
Module width: 5.2 mm / 0.205 inch	
10 ... 11 mm / 0.39 ... 0.41 inch	



4

Without GND contact      With GND contact

For mounting via M3 screw and nut or for 2.9 mm Ø self-tapping screw from top

plain	
⊕-N-L1-L2	
N-⊕-L1-L2	
	N-⊕-L1-L2
	⊕-N-L1-L2
⊕-N-L1-L2-L3	
L3-N-⊕-L1-L2	
	L3-N-⊕-L1-L2
	⊕-N-L1-L2-L3
1 snap-in mounting foot per pole	
plain	
⊕-N-L1-L2	
N-⊕-L1-L2	
	N-⊕-L1-L2
	⊕-N-L1-L2
⊕-N-L1-L2-L3	
L3-N-⊕-L1-L2	
	L3-N-⊕-L1-L2
	⊕-N-L1-L2-L3
Snap-in foot at pos. 1+4	
plain	
⊕-N-L1-L2	
N-⊕-L1-L2	
	N-⊕-L1-L2
	⊕-N-L1-L2
Snap-in mounting foot at pos. 1+3+5	
plain	
⊕-N-L1-L2-L3	
L3-N-⊕-L1-L2	
	L3-N-⊕-L1-L2
	⊕-N-L1-L2-L3

Item No.	Item No.	Pack. Unit
● 862-504	○ 862-604	200
● 862-1504	○ 862-1604	200
● 862-2504	○ 862-2604	200
● 862-8504	○ 862-8604	200
● 862-9504	○ 862-9604	200
● 862-534	○ 862-634	200
● 862-1534	○ 862-1634	200
● 862-2534	○ 862-2634	200
● 862-8534	○ 862-8634	200
● 862-9534	○ 862-9634	200
● 862-594	○ 862-694	200
● 862-1594	○ 862-1694	200
● 862-2594	○ 862-2694	200
● 862-8594	○ 862-8694	200
● 862-9594	○ 862-9694	200

Item No.	Item No.	Pack. Unit
● 862-505	○ 862-605	200
● 862-1505	○ 862-1605	200
● 862-2505	○ 862-2605	200
● 862-8505	○ 862-8605	200
● 862-9505	○ 862-9605	200
● 862-525	○ 862-625	200
● 862-1525	○ 862-1625	200
● 862-2525	○ 862-2625	200
● 862-8525	○ 862-8625	200
● 862-9525	○ 862-9625	200
● 862-515	○ 862-615	200
● 862-1515	○ 862-1615	200
● 862-2515	○ 862-2615	200
● 862-8515	○ 862-8615	200
● 862-9515	○ 862-9615	200

### 862 Series Accessories



Operating tool with a partially insulated shaft; type 2;  
(3.5 x 0.5) mm blade

Item No.	Pack. Unit
210-720	1



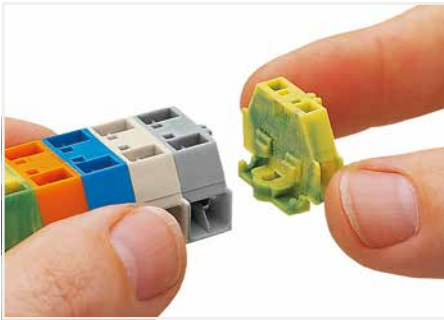
Marking strip; plain; 7.5 mm wide; 50 m reel

Color	Item No.	Pack. Unit
○ white	709-178	1

## Modular Terminal Blocks and Terminal Strips

### 260 to 262 Series

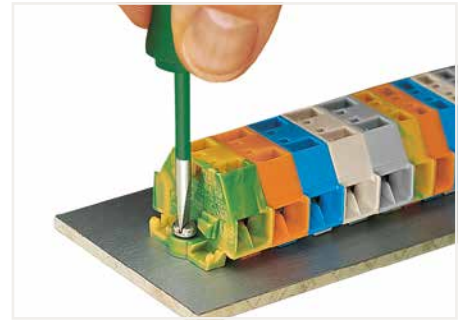
#### Description and Installation



Assembling modular terminal blocks into terminal strips.

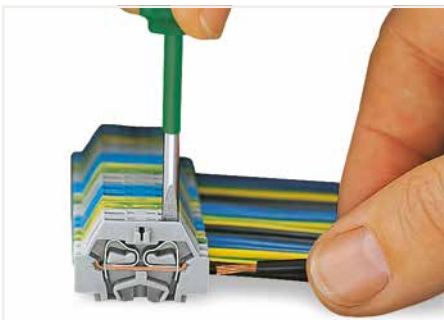


Mounting an end plate.

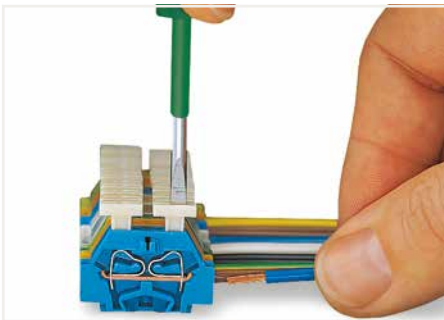


Mounting and securing a terminal strip directly to the plate via screw-type flanges.

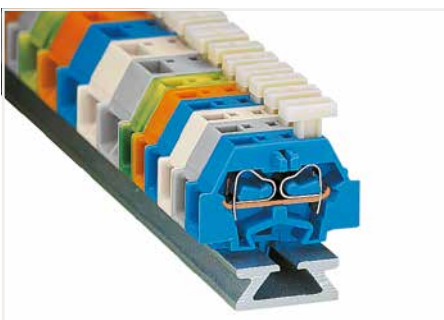
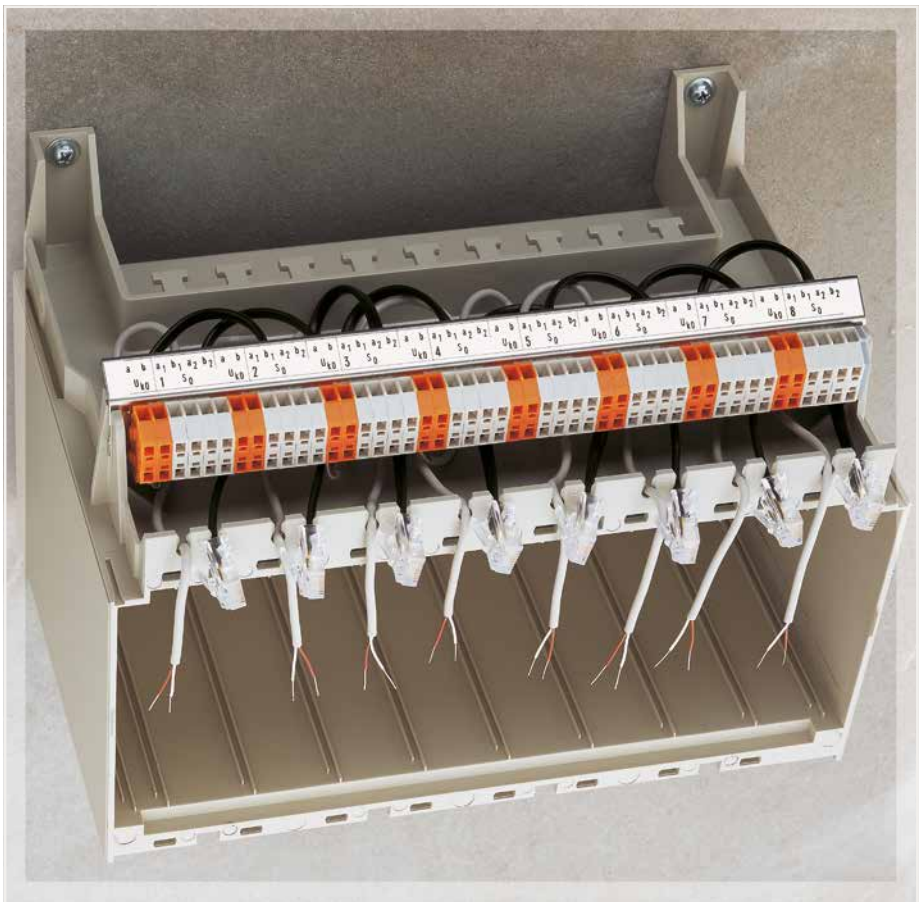
4



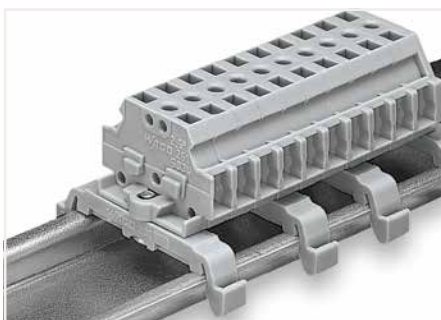
**CAGE CLAMP® termination:**  
Inserting a conductor.  
With ferruled conductors, it is necessary to use a terminal block one size smaller than the conductor's nominal cross section.



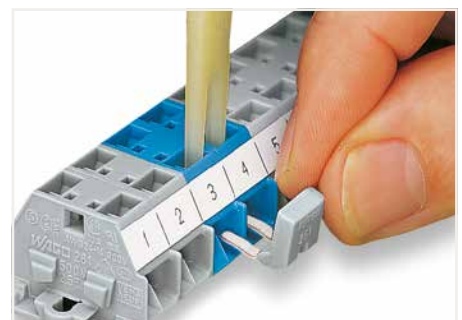
**CAGE CLAMP® termination:**  
Inserting a conductor via push-button.



Terminal strip; with push-buttons on one side



Terminal strip; with marker slot for Mini-WSB Quick Marking System



Commoning with comb-style jumper bar.



**CAGE CLAMP®** terminates the following copper conductors:  
solid



stranded

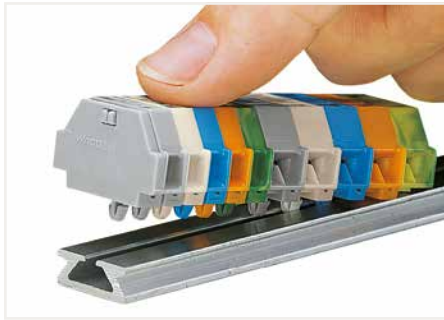


fine-stranded,  
also with tinned  
single strands

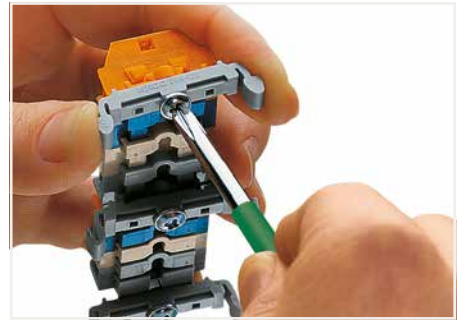
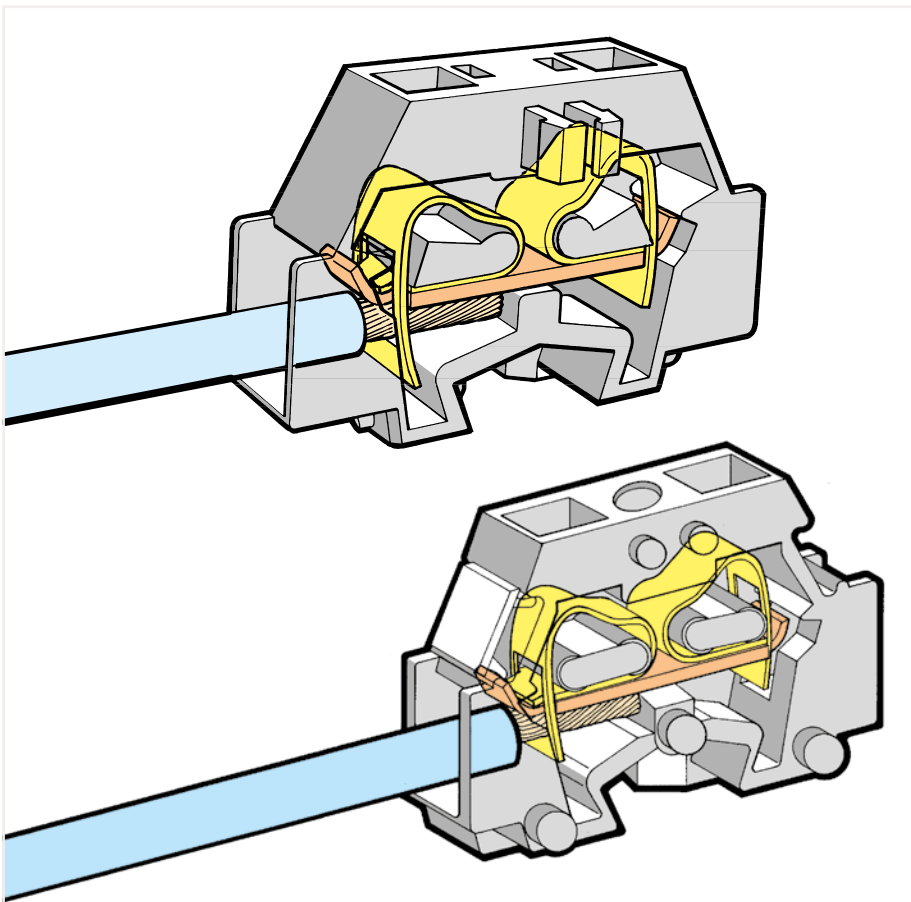




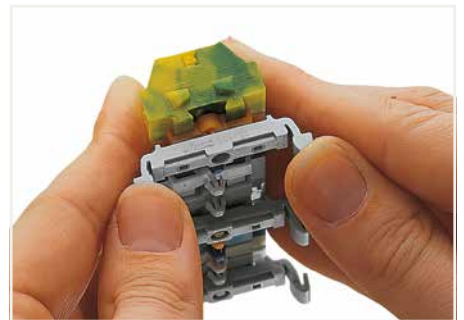
Mounting a terminal strip with snap-in feet into holes.



Mounting a terminal strip with snap-in feet onto the aluminum rail.

Mounting and securing a terminal strip directly to the plate via screw-type flanges.  
screwing a mounting foot (209-123)  
(distance between mounting feet: approx. 20 ... 25 mm)

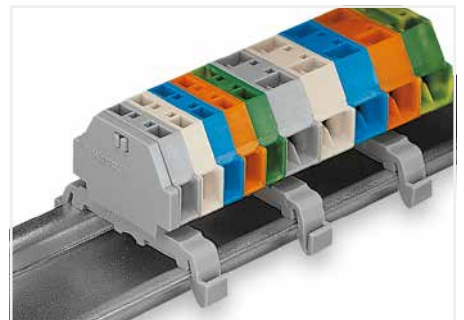
Terminal strip; with mounting flanges; for DIN-35 rail

Terminal strip; with snap-in mounting feet; snapping a mounting foot (209-120)  
(distance between mounting feet: approx. 20 ... 25 mm)

Marking with self-adhesive marking strips.



Marking by direct printing (upon request).



Terminal strip; with snap-in mounting feet; for DIN-35 rail

fine-stranded,  
tip-bondedfine-stranded,  
with ferrule  
(gastight crimped)fine-stranded,  
with pin terminal  
(gastight crimped)

## Modular Terminal Block; with Mounting Flange or Snap-In Mounting Foot

1.5 mm<sup>2</sup>; 260 Series

## Technical Data

0.08 ... 1.5 mm<sup>2</sup> (28 ... 16 AWG)

400 V/6 kV/3 ①

I<sub>N</sub> 18 A

Terminal block width: 5 mm / 0.197 inch

8 ... 9 mm / 0.31 ... 0.35 inch

## Technical Data

0.08 ... 1.5 mm<sup>2</sup> (28 ... 16 AWG)

400 V/6 kV/3 ①

I<sub>N</sub> 18 A

Terminal block width: 8 mm / 0.315 inch

8 ... 9 mm / 0.31 ... 0.35 inch



2-conductor terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
gray	260-301	300 (50)
light gray	260-303	300 (50)
blue	260-304	300 (50)
orange	260-306	300 (50)
green-yellow	260-307	300 (50)

4-conductor terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
gray	260-331	300 (50)
light gray	260-333	300 (50)
blue	260-334	300 (50)
orange	260-336	300 (50)
green-yellow	260-337	300 (50)

2-conductor terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

gray	260-311	300 (50)
light gray	260-313	300 (50)
blue	260-314	300 (50)
orange	260-316	300 (50)
green-yellow	260-317	300 (50)

4-conductor terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

gray	260-341	300 (50)
light gray	260-343	300 (50)
blue	260-344	300 (50)
orange	260-346	300 (50)
green-yellow	260-347	300 (50)

Space-saving 2-conductor end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

gray	260-321	300 (50)
light gray	260-323	300 (50)
blue	260-324	300 (50)
orange	260-326	300 (50)
green-yellow	260-327	300 (50)

Space-saving 4-conductor end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

gray	260-351	300 (50)
light gray	260-353	300 (50)
blue	260-354	300 (50)
orange	260-356	300 (50)
green-yellow	260-357	300 (50)

## Accessories; item-specific

Test plug module; snaps together; 5 mm wide

gray	249-135	100 (25)
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Test plug module; with locking latches; snaps together; 5 mm wide

gray	260-404	100 (25)
------	---------	----------



## Accessories; item-specific

Test plug module; snaps together; 8 mm wide

gray	249-138	100 (25)
------	---------	----------



Test plug module; with locking latches; snaps together; 8 mm wide

gray	260-405	100 (25)
------	---------	----------



## Accessories; 260 Series

End plate; with mounting flange

gray	260-361	300 (50)
------	---------	----------



End plate; with snap-in mounting foot

gray	260-371	300 (50)
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Comb-style jumper bar; insulated; reduces maximum conductor size to 1 mm<sup>2</sup>; I<sub>N</sub> 10 A; gray

2-way	260-402	25
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Operating tool; insulated; for comb-style jumper bar

2-way	209-132	1
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① 400 V = rated voltage

6 kV = rated impulse voltage

3 = pollution degree

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

## Accessories; 260 Series

Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

red	210-136	50
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Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

yellow	210-137	50
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Aluminum mounting rail; 1000 mm long; 18 mm wide; 7 mm high

	210-154	1
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Plastic end stop; with WSB marker slot; for aluminum rail (210-154); 6 mm wide

	209-122	25
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Mounting foot; for DIN-35 rail; snaps onto terminal blocks with snap-in mounting foot; 6.4 mm wide

gray	209-120	25
------	---------	----



Mounting screw; for mounting foot (209-120)

	209-119	500 (50)
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Mounting foot with screw; for DIN-35 rail; can be screwed on terminal blocks with mounting flange; 6.4 mm wide

gray	209-123	25
------	---------	----



Mounting adapter; for DIN-35 rail; can be used as end plate; 6.5 mm wide

gray	209-137	25
------	---------	----



Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	210-720	1
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## Terminal Strip; with Mounting Flanges or Snap-in Mounting Feet 1.5 mm<sup>2</sup>; 260 Series

### Technical Data

0.08 ... 1.5 mm<sup>2</sup> (28 ... 16 AWG)

28 ... 16 AWG

400 V/6 kV/3 ①

300 V, 10 A ②

I<sub>N</sub> 18 A

300 V, 15 A ③

Pole width: 5 mm / 0.197 inch

8 ... 9 mm / 0.31 ... 0.35 inch

### Technical Data

0.08 ... 1.5 mm<sup>2</sup> (28 ... 16 AWG)

28 ... 16 AWG

400 V/6 kV/3 ①

300 V, 10 A ②

I<sub>N</sub> 18 A

300 V, 15 A ③

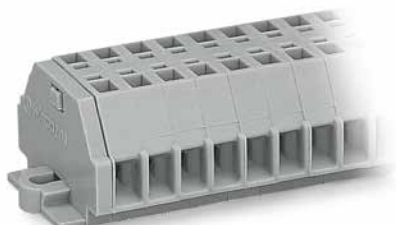
Pole width: 8 mm / 0.315 inch

8 ... 9 mm / 0.31 ... 0.35 inch

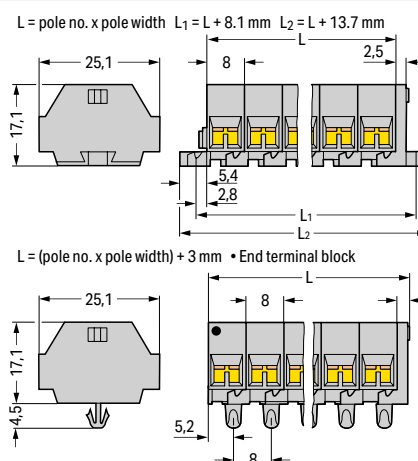
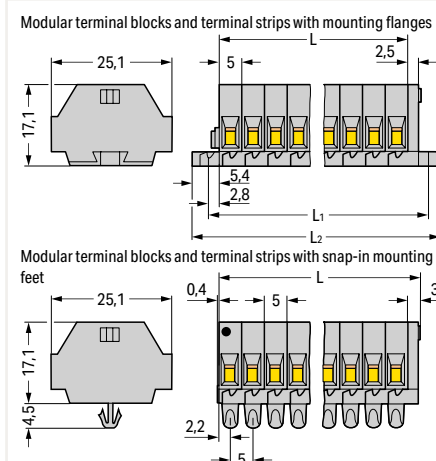
- ① 400 V = rated voltage  
6 kV = rated impulse voltage  
3 = pollution degree

- ② Longer strips and/or mixed-color assemblies are available upon request.

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)



Dimensions in mm



Terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter (with 209-123 Mounting Foot for DIN-35 rail)



Terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter (also for 210-154 Aluminum Rail or with 209-120 Mounting Foot for DIN-35 rail)

2-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
2	260-102	100
3	260-103	100
4	260-104	100
5	260-105	100
6	260-106	100
7	260-107	100
8	260-108	100
9	260-109	50
10	260-110	50
11	260-111	50
12 ②	260-112	25

4-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
2	260-202	100
3	260-203	100
4	260-204	100
5	260-205	100
6	260-206	100
7	260-207	100
8	260-208	100
9	260-209	50
10	260-210	50
11	260-211	25
12 ②	260-212	25

2-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
2	260-152	100
3	260-153	100
4	260-154	100
5	260-155	100
6	260-156	50
7	260-157	50
8	260-158	50
9	260-159	50
10	260-160	25
11	260-161	25
12 ②	260-162	25

4-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray

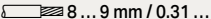
Pole No.	Item No.	Pack. Unit
2	260-252	100
3	260-253	100
4	260-254	100
5	260-255	100
6	260-256	50
7	260-257	50
8	260-258	50
9	260-259	50
10	260-260	25
11	260-261	25
12 ②	260-262	25



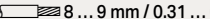
## Modular Terminal Block; with Mounting Flange or Snap-In Mounting Foot

2.5 mm<sup>2</sup>; 261 Series

## Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 14 AWG
500 V/6 kV/3 ①	300 V, 15 A ②
I <sub>N</sub> 24 A	300 V, 20 A ③
Terminal block width: 6 mm / 0.236 inch	
 8 ... 9 mm / 0.31 ... 0.35 inch	

## Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 14 AWG
500 V/6 kV/3 ①	300 V, 15 A ②
I <sub>N</sub> 24 A	300 V, 20 A ③
Terminal block width: 10 mm / 0.394 inch	
 8 ... 9 mm / 0.31 ... 0.35 inch	

- ① 500 V = rated voltage  
6 kV = rated impulse voltage  
3 = pollution degree

- ② Terminal blocks with a blue insulated housing are suitable for Ex i applications.

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)



2-conductor terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
gray	261-301	200 (50)
light gray	261-303	200 (50)
blue	261-304 ②	200 (50)
orange	261-306	200 (50)
green-yellow	261-307	200 (50)

4-conductor terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
gray	261-331	200 (50)
light gray	261-333	200 (50)
blue	261-334 ②	200 (50)
orange	261-336	200 (50)
green-yellow	261-337	200 (50)

2-conductor terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

gray	261-311	200 (50)
light gray	261-313	200 (50)
blue	261-314 ②	200 (50)
orange	261-316	200 (50)
green-yellow	261-317	200 (50)

4-conductor terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

gray	261-341	200 (50)
light gray	261-343	200 (50)
blue	261-344 ②	200 (50)
orange	261-346	200 (50)
green-yellow	261-347	200 (50)

Space-saving 2-conductor end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

gray	261-321	200 (50)
light gray	261-323	200 (50)
blue	261-324 ②	200 (50)
orange	261-326	200 (50)
green-yellow	261-327	200 (50)

Space-saving 4-conductor end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

gray	261-351	200 (50)
light gray	261-353	200 (50)
blue	261-354 ②	200 (50)
orange	261-356	200 (50)
green-yellow	261-357	200 (50)

## Accessories; item-specific

Test plug module; snaps together; 6 mm wide

gray	249-136	100 (25)
------	---------	----------



Test plug module; with locking latches; snaps together; 6 mm wide

gray	261-404	100 (25)
------	---------	----------



## Accessories; item-specific

Test plug module; snaps together; 10 mm wide

gray	249-139	100 (25)
------	---------	----------



Test plug module; with locking latches; snaps together; 10 mm wide

gray	261-405	100 (25)
------	---------	----------



## Accessories; 261 Series

End plate; with mounting flange

gray	261-361	300 (50)
------	---------	----------



End plate; with snap-in mounting foot

gray	261-371	300 (50)
------	---------	----------



Comb-style jumper bar; insulated; reduces maximum conductor size to 1.5 mm<sup>2</sup>; I<sub>N</sub> 16 A; gray

2-way	261-402	25
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Operating tool; insulated; for comb-style jumper bar

2-way	209-132	1
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## Accessories; 261 Series

Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

red	210-136	50
-----	---------	----



Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

yellow	210-137	50
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Aluminum mounting rail; 1000 mm long; 18 mm wide; 7 mm high

	210-154	1
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Plastic end stop; with WSB marker slot; for aluminum rail (210-154); 6 mm wide

	209-122	25
--	---------	----



Mounting foot; for DIN-35 rail; snaps onto terminal blocks with snap-in mounting foot; 6.4 mm wide

gray	209-120	25
------	---------	----



Mounting screw; for mounting foot (209-120)

	209-119	500 (50)
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Mounting foot with screw; for DIN-35 rail; can be screwed on terminal blocks with mounting flange; 6.4 mm wide

gray	209-123	25
------	---------	----



Mounting adapter; for DIN-35 rail; can be used as end plate; 6.5 mm wide

gray	209-137	25
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Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	210-720	1
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## Terminal Strip; with Mounting Flanges or Snap-in Mounting Feet 2.5 mm<sup>2</sup>; 261 Series

### Technical Data

0.08 ... 2.5 mm<sup>2</sup> 28 ... 14 AWG

500 V/6 kV/3 ① 300 V, 15 A ②

I<sub>N</sub> 24 A 300 V, 20 A ③

Pole width: 6 mm / 0.236 inch

8 ... 9 mm / 0.31 ... 0.35 inch

### Technical Data

0.08 ... 2.5 mm<sup>2</sup> 28 ... 14 AWG

500 V/6 kV/3 ① 300 V, 15 A ②

I<sub>N</sub> 24 A 300 V, 20 A ③

Pole width: 10 mm / 0.394 inch

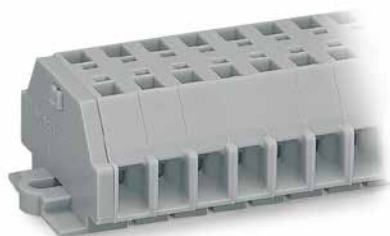
8 ... 9 mm / 0.31 ... 0.35 inch

- ① 500 V = rated voltage  
6 kV = rated impulse voltage  
3 = pollution degree

- ② Terminal strips with a blue insulated housing are suitable for Ex i applications.  
Item no. suffixes .../000-006 (upon request)

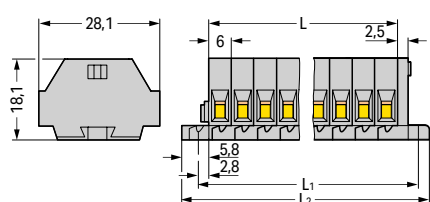
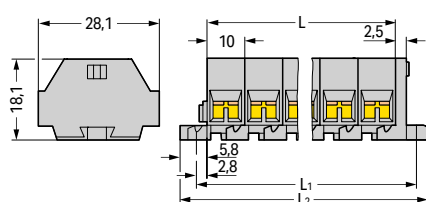
- ③ Longer strips and/or mixed-color assemblies are available upon request.

Approvals and corresponding ratings,  
visit [www.wago.com](http://www.wago.com)

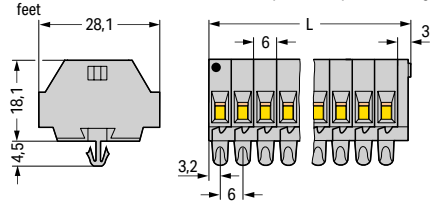


Dimensions in mm

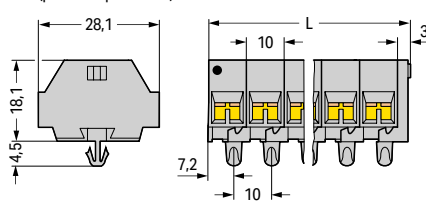
Modular terminal blocks and terminal strips with mounting flanges

L = pole no. x pole width L<sub>1</sub> = L + 8.1 mm L<sub>2</sub> = L + 14.1 mm

Modular terminal blocks and terminal strips with snap-in mounting feet



L = (pole no. x pole width) + 3 mm • End terminal block



2-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	261-102	100
3	261-103	100
4	261-104	100
5	261-105	200
6	261-106	50
7	261-107	50
8	261-108	50
9	261-109	50
10	261-110	25
11	261-111	25
12 ③	261-112	25

4-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	261-202	100
3	261-203	100
4	261-204	100
5	261-205	100
6	261-206	50
7	261-207	50
8	261-208	50
9	261-209	50
10	261-210	25
11	261-211	25
12 ③	261-212	25

2-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	261-152	100
3	261-153	100
4	261-154	100
5	261-155	100
6	261-156	50
7	261-157	50
8	261-158	50
9	261-159	50
10	261-160	25
11	261-161	25
12 ③	261-162	25

4-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	261-252	100
3	261-253	100
4	261-254	100
5	261-255	100
6	261-256	50
7	261-257	50
8	261-258	50
9	261-259	50
10	261-260	25
11	261-261	25
12 ③	261-262	25



Terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter (with 209-123 Mounting Foot for DIN-35 rail)



Terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter (also for 210-154 Aluminum Rail or with 209-120 Mounting Foot for DIN-35 rail)

## Terminal Strip; with Mounting Flanges; with Marker Slot for Mini-WSB Quick Marking System 2.5 mm<sup>2</sup>; 261 Series

### Technical Data

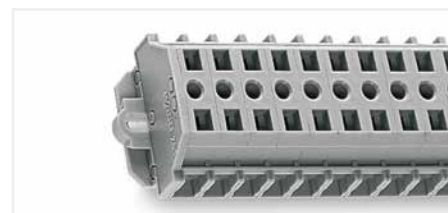
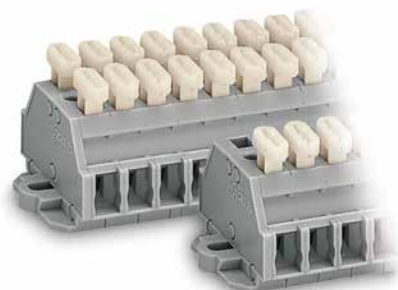
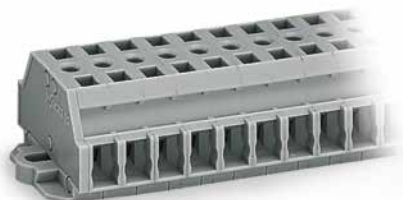
0.08 ... 2.5 mm <sup>2</sup>	28 ... 14 AWG
500 V/6 kV/3 ❶	300 V, 15 A ❷
I <sub>N</sub> 24 A	300 V, 20 A ❸
Pole width: 6 mm / 0.236 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	

### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 14 AWG
500 V/6 kV/3 ❶	300 V, 15 A ❷
I <sub>N</sub> 24 A	300 V, 20 A ❸
Pole width: 6 mm / 0.236 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	

- ❶ 500 V = rated voltage  
6 kV = rated impulse voltage  
3 = pollution degree
- ❷ Longer strips are available upon request.

Approvals and corresponding ratings,  
visit [www.wago.com](http://www.wago.com)



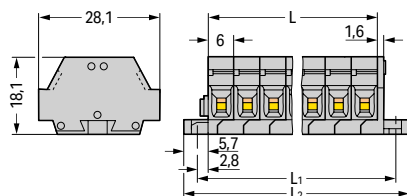
Terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter (with 209-123 Mounting Foot for DIN-35 rail)



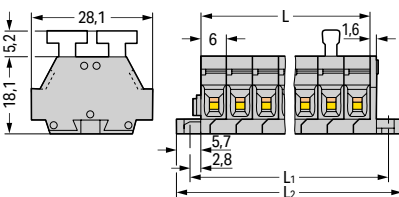
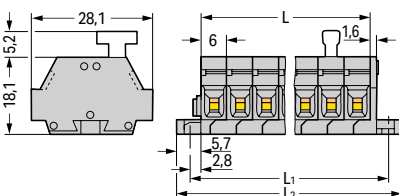
Terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter (with 209-123 Mounting Foot for DIN-35 rail)

Dimensions in mm

Modular terminal blocks and terminal strips with mounting flanges



L = pole no. x pole width L<sub>1</sub> = L + 7.2 mm L<sub>2</sub> = L + 13 mm



2-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
2	261-422	100
3	261-423	100
4	261-424	100
5	261-425	200
6	261-426	50
7	261-427	50
8	261-428	50
9	261-429	50
10	261-430	25
11	261-431	25
12 ❷	261-432	25

2-conductor terminal strip; with push-buttons on one side; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
2	261-422/331-000	100
3	261-423/331-000	100
4	261-424/331-000	100
5	261-425/331-000	100
6	261-426/331-000	50
7	261-427/331-000	50
8	261-428/331-000	50
9	261-429/331-000	50
10	261-430/331-000	25
11	261-431/331-000	25
12 ❸	261-432/331-000	25

2-conductor terminal strip; with push-buttons on both sides; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
2	261-422/341-000	100
3	261-423/341-000	100
4	261-424/341-000	100
5	261-425/341-000	100
6	261-426/341-000	50
7	261-427/341-000	50
8	261-428/341-000	50
9	261-429/341-000	50
10	261-430/341-000	25
11	261-431/341-000	25
12 ❹	261-432/341-000	25



## Modular Terminal Block; with Mounting Flange or Snap-In Mounting Foot

4 mm<sup>2</sup>; 262 Series

## Technical Data

0.08 ... 4 mm<sup>2</sup> 28 ... 12 AWG

630 V/8 kV/3 ① 300 V, 20 A ②

I<sub>N</sub> 24 A 300 V, 20 A ③

Terminal block width: 7 mm / 0.276 inch

 9 ... 10 mm / 0.35 ... 0.39 inch

## Technical Data

0.08 ... 4 mm<sup>2</sup> 28 ... 12 AWG

630 V/8 kV/3 ① 300 V, 20 A ②

I<sub>N</sub> 32 A 300 V, 20 A ③

Terminal block width: 12 mm / 0.472 inch

 9 ... 10 mm / 0.35 ... 0.39 inch

2-conductor terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
gray	262-301	100 (50)
blue	262-304 ②	100 (50)
orange	262-306	100 (50)
green-yellow	262-307	100 (50)

4-conductor terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
gray	262-331	100 (50)
blue	262-334 ②	100 (50)
orange	262-336	100 (50)
green-yellow	262-337	100 (50)

2-conductor terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

gray	262-311	100 (50)
blue	262-314 ②	100 (50)
orange	262-316	100 (50)
green-yellow	262-317	100 (50)

4-conductor terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

gray	262-341	100 (50)
blue	262-344 ②	100 (50)
orange	262-346	100 (50)
green-yellow	262-347	100 (50)

Space-saving 2-conductor end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

gray	262-321	100 (50)
blue	262-324 ②	100 (50)
orange	262-326	100 (50)
green-yellow	262-327	100 (50)

Space-saving 4-conductor end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

gray	262-351	100 (50)
blue	262-354 ②	100 (50)
orange	262-356	100 (50)
green-yellow	262-357	100 (50)

## Accessories; item-specific

Test plug module; snaps together; 7 mm wide

 gray 249-137 100 (25)


## Accessories; item-specific

Test plug module; snaps together; 12 mm wide


 gray 249-140 100 (25)

## Accessories; 262 Series

End plate; with mounting flange

 gray 262-361 300 (50)


Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

 red 210-136 50

End plate; with snap-in mounting foot

 gray 262-371 300 (50)

Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

 yellow 210-137 50Comb-style jumper bar; insulated; reduces maximum conductor size to 2.5 mm<sup>2</sup>; I<sub>N</sub> 16 A; gray 2-way 262-402 25

Aluminum mounting rail; 1000 mm long; 18 mm wide; 7 mm high

 210-154 1

Operating tool; insulated; for comb-style jumper bar

 2-way 209-132 1

Plastic end stop; with WSB marker slot; for aluminum rail (210-154); 6 mm wide

 209-122 25① 630 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree

② Terminal blocks with a blue insulated housing are suitable for Ex i applications.


Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

## Accessories; 262 Series

Mounting foot; for DIN-35 rail; snaps onto terminal blocks with snap-in mounting foot; 6.4 mm wide

 gray 209-120 25

Mounting screw; for mounting foot (209-120)

 209-119 500 (50)


Mounting foot with screw; for DIN-35 rail; can be screwed on terminal blocks with mounting flange; 6.4 mm wide

 gray 209-123 25

Mounting adapter; for DIN-35 rail; can be used as end plate; 6.5 mm wide

 gray 209-137 25

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

 210-720 1

## Terminal Strip; with Mounting Flanges or Snap-in Mounting Feet 4 mm<sup>2</sup>; 262 Series

### Technical Data

0.08 ... 4 mm<sup>2</sup> 28 ... 12 AWG

630 V/8 kV/3 ① 300 V, 20 A ②

I<sub>N</sub> 24 A 300 V, 20 A ③

Pole width: 7 mm / 0.276 inch

9 ... 10 mm / 0.35 ... 0.39 inch

### Technical Data

0.08 ... 4 mm<sup>2</sup> 28 ... 12 AWG

630 V/8 kV/3 ① 300 V, 20 A ②

I<sub>N</sub> 32 A 300 V, 20 A ③

Pole width: 12 mm / 0.472 inch

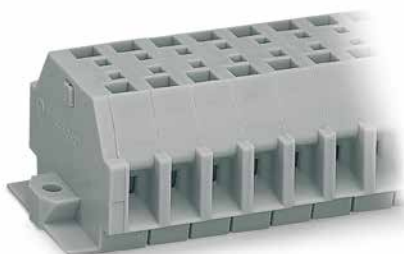
9 ... 10 mm / 0.35 ... 0.39 inch

- ① 630 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree

- ② Terminal strips with a blue insulated housing are suitable for Ex i applications.  
Item no. suffixes .../000-006 (upon request)

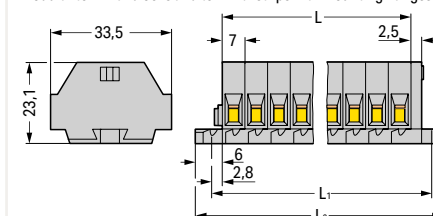
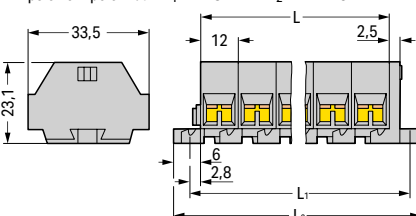
- ③ Longer strips and/or mixed-color assemblies are available upon request.

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

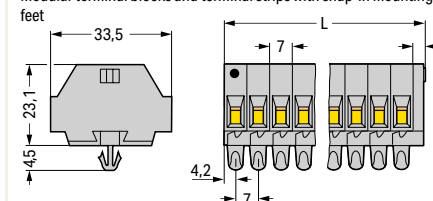


Dimensions in mm

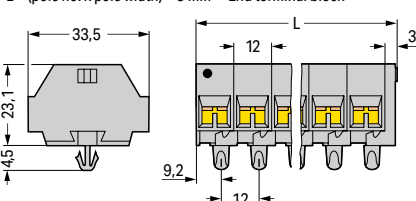
Modular terminal blocks and terminal strips with mounting flanges

L = pole no. x pole width L<sub>1</sub> = L + 8.1 mm L<sub>2</sub> = L + 14.5 mm

Modular terminal blocks and terminal strips with snap-in mounting feet



L = (pole no. x pole width) + 3 mm • End terminal block



2-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	262-102	100
3	262-103	100
4	262-104	100
5	262-105	100
6	262-106	100
7	262-107	100
8	262-108	100
9	262-109	50
10	262-110	25
11	262-111	25
12 ③	262-112	25

4-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	262-202	100
3	262-203	100
4	262-204	100
5	262-205	100
6	262-206	50
7	262-207	50
8	262-208	50
9	262-209	50
10	262-210	25
11	262-211	25
12 ③	262-212	25

2-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	262-152	100
3	262-153	100
4	262-154	100
5	262-155	100
6	262-156	50
7	262-157	50
8	262-158	50
9	262-159	50
10	262-160	25
11	262-161	25
12 ③	262-162	25

4-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray ②

Pole No.	Item No.	Pack. Unit
2	262-252	100
3	262-253	100
4	262-254	100
5	262-255	100
6	262-256	50
7	262-257	50
8	262-258	50
9	262-259	50
10	262-260	25
11	262-261	25
12 ③	262-262	25



Terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter (with 209-123 Mounting Foot for DIN-35 rail)



Terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter (also for 210-154 Aluminum Rail or with 209-120 Mounting Foot for DIN-35 rail)




4






## Modular Ex Terminal Block; with Mounting Flange or Snap-In Mounting Foot

### 4 mm<sup>2</sup>; 262 Series

#### Technical Data

0.5 ... 4 mm <sup>2</sup>	28 ... 12 AWG
550 V	300 V, 20 A 
I <sub>N</sub> 23 A	300 V, 20 A 
Terminal block width: 7 mm / 0.276 inch	
 9 ... 10 mm / 0.35 ... 0.39 inch	


#### Technical Data

0.5 ... 4 mm <sup>2</sup>	28 ... 12 AWG
550 V	300 V, 20 A 
I <sub>N</sub> 30 A	300 V, 20 A 
Terminal block width: 12 mm / 0.472 inch	
 9 ... 10 mm / 0.35 ... 0.39 inch	


① Using crimped ferrules for corrosion protection, the rated cross section is reduced by one size. For conductor types and conductor preparation, see Section 11 "Electrical Equipment for Hazardous Environments."




2-conductor Ex e II terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
○ light gray 	262-130	100 (50)


4-conductor Ex e II terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail

Color	Item No.	Pack. Unit
○ light gray 	262-230	100 (50)


2-conductor Ex e II terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

○ light gray 	262-180	100 (50)
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
4-conductor Ex e II terminal block; with snap-in mounting foot; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail

○ light gray 	262-280	100 (50)
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Space-saving 2-conductor Ex e II end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

○ light gray 	262-181	100 (50)
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Space-saving 4-conductor Ex e II end terminal block; without protruding snap-in mounting foot; for terminal strips with snap-in mounting feet

○ light gray 	262-281	100 (50)
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#### Accessories; 262 Series

End plate; with mounting flange

gray	262-363	50
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Mounting foot; for DIN-35 rail; snaps onto terminal blocks with snap-in mounting foot; 6.4 mm wide

gray	209-120	25
------	---------	----



End plate; with snap-in mounting foot

gray	262-373	50
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Mounting screw; for mounting foot (209-120)

	209-119	500 (50)
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Comb-style jumper bar; insulated; reduces maximum conductor size to 2.5 mm<sup>2</sup>; I<sub>N</sub> 16 A; gray

2-way	262-402	25
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Mounting foot with screw; for DIN-35 rail; can be screwed on terminal blocks with mounting flange; 6.4 mm wide

gray	209-123	25
------	---------	----



Operating tool; insulated; for comb-style jumper bar

2-way	209-132	1
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Mounting adapter; for DIN-35 rail; can be used as end plate; 6.5 mm wide

gray	209-137	25
------	---------	----



Aluminum mounting rail; 1000 mm long; 18 mm wide; 7 mm high

	210-154	1
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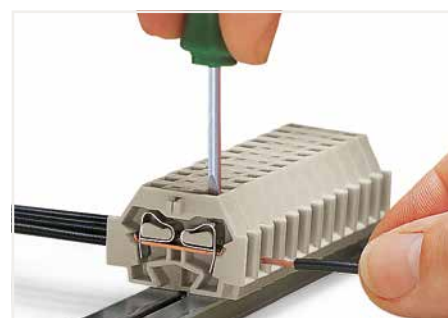
Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	210-720	1
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Plastic end stop; with WSB marker slot; for aluminum rail (210-154); 6 mm wide

	209-122	25
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CAGE CLAMP® termination:  
Inserting a conductor.






Commoning with comb-style jumper bar.




## Ex Terminal Strip; with Mounting Flanges or Snap-in Mounting Feet

### 4 mm<sup>2</sup>; 262 Series

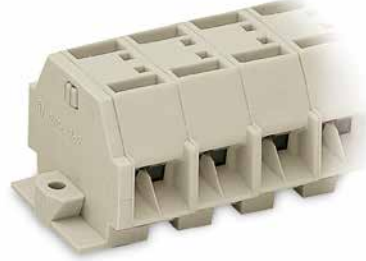
#### Technical Data

0.5 ... 4 mm <sup>2</sup>	28 ... 12 AWG
550 V	300 V, 20 A 
I <sub>N</sub> 23 A	300 V, 20 A 
Pole width: 7 mm / 0.276 inch	
 9 ... 10 mm / 0.35 ... 0.39 inch	

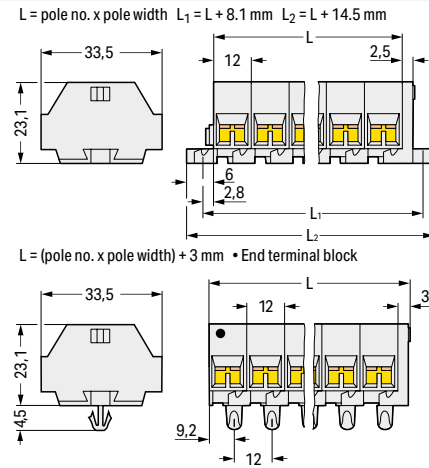
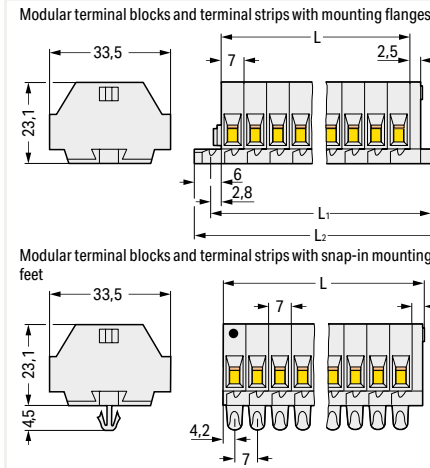
#### Technical Data

0.5 ... 4 mm <sup>2</sup>	28 ... 12 AWG
550 V	300 V, 20 A 
I <sub>N</sub> 30 A	300 V, 20 A 
Pole width: 12 mm / 0.472 inch	
 9 ... 10 mm / 0.35 ... 0.39 inch	


① Using crimped ferrules for corrosion protection, the rated cross section is reduced by one size. For conductor types and conductor preparation, see Section 11 "Electrical Equipment for Hazardous Environments."




Dimensions in mm




2-conductor Ex e II terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
○ 2	262-132	100
○ 3	262-133	100
○ 4	262-134	100
○ 5	262-135	100
○ 6	262-136	100
○ 7	262-137	50
○ 8	262-138	50
○ 9	262-139	50
○ 10	262-140	25
○ 11	262-141	25
○ 12 	262-142	25


4-conductor Ex e II terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; with mounting foot (209-123) also for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
○ 2	262-232	100
○ 3	262-233	100
○ 4	262-234	100
○ 5	262-235	100
○ 6	262-236	50
○ 7	262-237	50
○ 8	262-238	50
○ 9	262-239	50
○ 10	262-240	25
○ 11	262-241	25
○ 12 	262-242	25

2-conductor Ex e II terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
○ 2	262-182	100
○ 3	262-183	100
○ 4	262-184	100
○ 5	262-185	100
○ 6	262-186	50
○ 7	262-187	50
○ 8	262-188	50
○ 9	262-189	50
○ 10	262-190	25
○ 11	262-191	25
○ 12 	262-192	25

4-conductor Ex e II terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; also for aluminum rail (210-154) or with mounting foot (209-120) for DIN-35 rail; gray

Pole No.	Item No.	Pack. Unit
○ 2	262-282	100
○ 3	262-283	100
○ 4	262-284	100
○ 5	262-285	100
○ 6	262-286	50
○ 7	262-287	50
○ 8	262-288	50
○ 9	262-289	50
○ 10	262-290	25
○ 11	262-291	25
○ 12 	262-292	25



Terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter (with 209-123 Mounting Foot for DIN-35 rail)

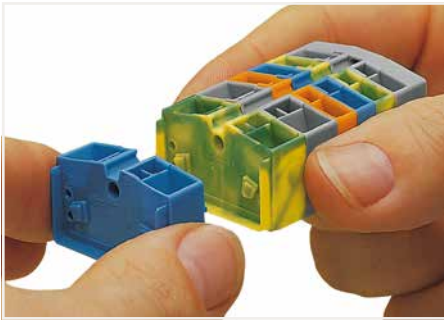


Terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter (also for 210-154 Aluminum Rail or with 209-120 Mounting Foot for DIN-35 rail)

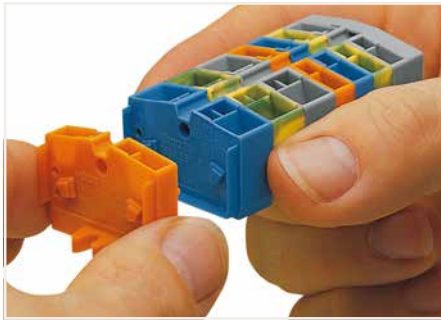
## Modular Terminal Blocks and Terminal Strips

### 264 Series

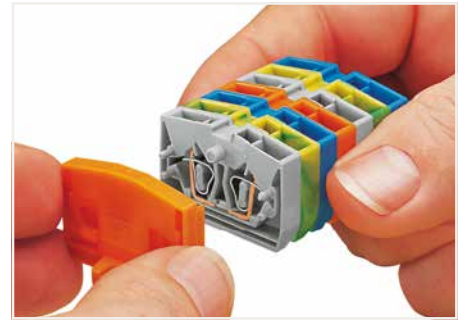
#### Description and Installation



Assembling modular terminal blocks into terminal strips.



Mounting an "end terminal block" with mounting flange.

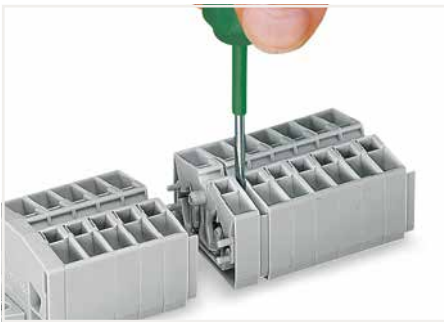


Mounting an end plate.

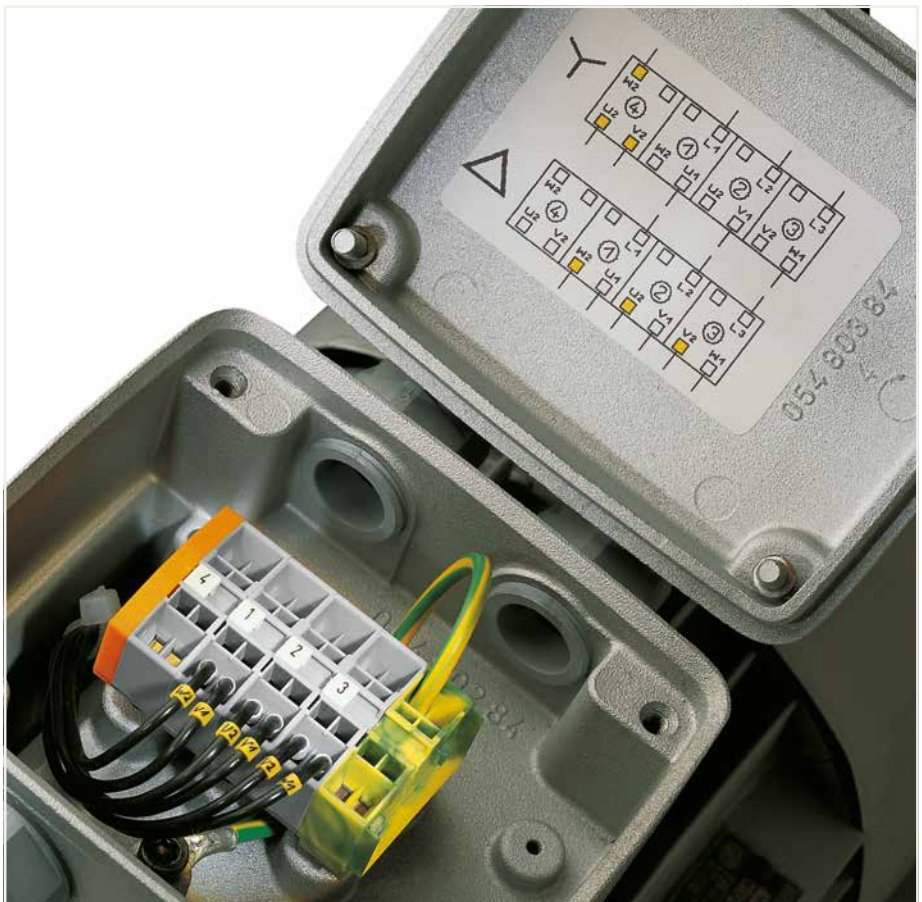
4



**CAGE CLAMP® termination:**  
Inserting a conductor.  
With ferruled conductors, it is necessary to use a terminal block one size smaller than the conductor's nominal cross section.



Removing a terminal block.



Commoning with comb-style jumper bar.



Marking with T-marker tag (209-290).



Combining 2- and 4-conductor terminal blocks.  
Marking via Mini-WSB Quick Marking System.



**CAGE CLAMP®** terminates the following copper conductors:  
solid



stranded



fine-stranded,  
also with tinned  
single strands

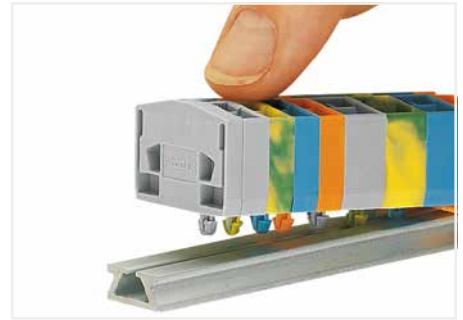




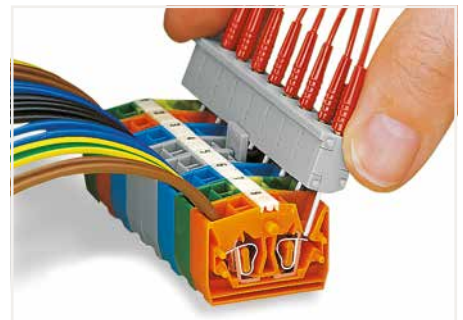
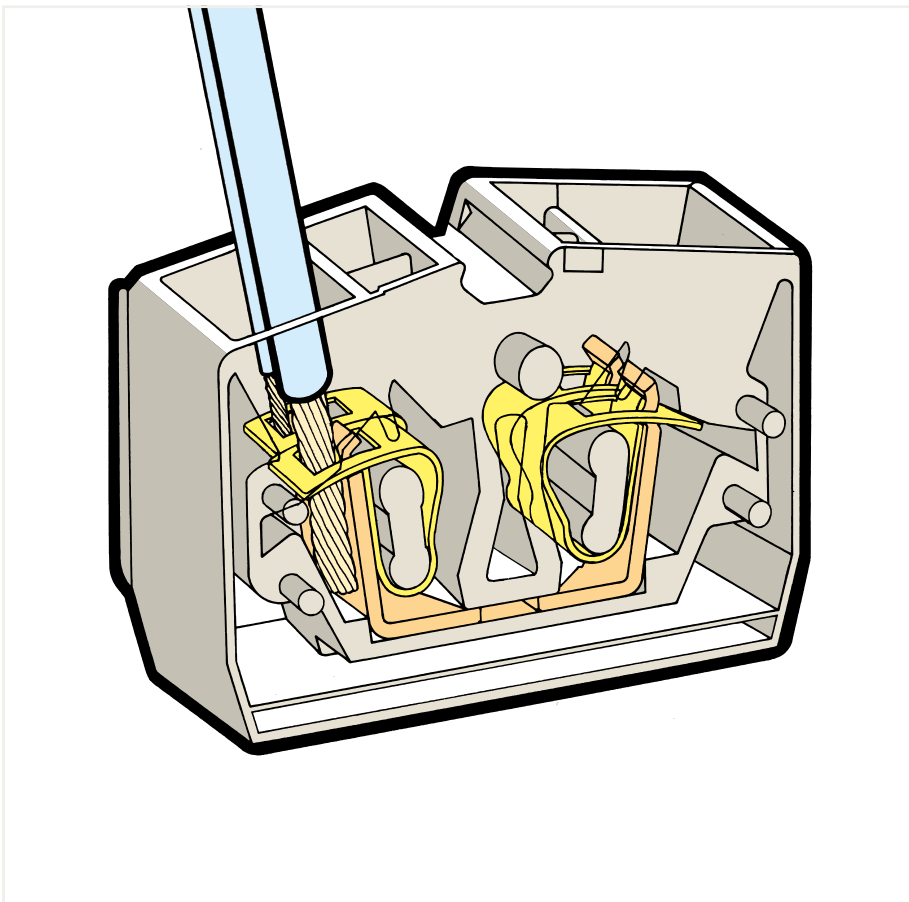
Mounting and securing a terminal strip directly to the plate via screw-type flanges.



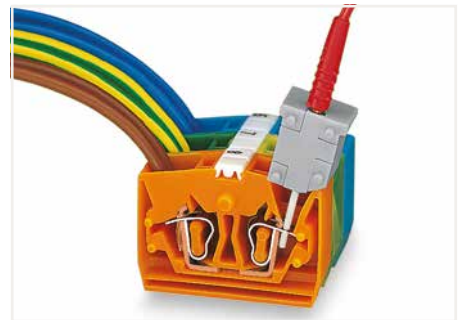
Mounting a terminal strip with snap-in feet into holes.



Mounting a terminal strip with snap-in feet onto the aluminum mounting rail.



Testing by touch contact to the CAGE CLAMP® spring (limited to 0.5 A and 48 V test voltage) – test pins are not protected against accidental contact.



Testing via CAGE CLAMP® on the current bar (max. nominal current: 6 A). CAGE CLAMP® clamps individual test contacts. The maximum test voltage is 400 V.



Ex e II terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter



Ex e II terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter



fine-stranded, tip-bonded



fine-stranded, with ferrule (gastight crimped)



fine-stranded, with pin terminal (gastight crimped)

## Modular Terminal Block; with Mounting Flange

2.5 mm<sup>2</sup>; 264 Series

## Technical Data

0.08 ... 2.5 mm<sup>2</sup> | 28 ... 12 AWG\*

800 V/8 kV/3 ① | 300 V, 20 A ②

I<sub>N</sub> 24 A | 600 V, 20 A ③

Terminal block width: 6 mm / 0.236 inch

 8 ... 9 mm / 0.31 ... 0.35 inch

## Technical Data

0.08 ... 2.5 mm<sup>2</sup> | 28 ... 12 AWG\*

800 V/8 kV/3 ① | 300 V, 20 A ②

I<sub>N</sub> 24 A | 600 V, 20 A ③

Terminal block width: 10 mm / 0.394 inch

 8 ... 9 mm / 0.31 ... 0.35 inch

\*12 AWG: THHN, THWN

- ① 800 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree
- ② Terminal blocks with a blue insulated housing are suitable for Ex i applications.
- ③ Terminal blocks with an Ex mark are suitable for Ex e II applications.  
0.5 ... 2.5 mm<sup>2</sup> / 20 ... 12 AWG\*  
690 V; 23 A

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

2-conductor center terminal block; required between end plate and end terminal block for terminal strips with mounting flanges

Color	Item No.	Pack. Unit
gray	264-321	100
blue	264-324 ②	100
orange	264-326	100
green-yellow	264-327	100
light gray	264-131 ③	100

4-conductor center terminal block; required between end plate and end terminal block for terminal strips with mounting flanges

Color	Item No.	Pack. Unit
gray	264-351	100
blue	264-354 ②	100
orange	264-356	100
green-yellow	264-357	100
light gray	264-231 ③	100

2-conductor end terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter

gray	264-301	100
blue	264-304 ②	100
orange	264-306	100
green-yellow	264-307	100
light gray	264-130 ③	100

4-conductor end terminal block; with mounting flange; for screw or similar mounting types; 3.2 mm mounting hole diameter

gray	264-331	100
blue	264-334 ②	100
orange	264-336	100
green-yellow	264-337	100
light gray	264-230 ③	100

## Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	281-492	100 (25)
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## Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	280-492	200 (25)
-------	---------	----------



Test plug module; snaps together; 6 mm wide

gray	249-136	100 (25)
------	---------	----------



Test plug module; snaps together; 10 mm wide

gray	249-139	100 (25)
------	---------	----------



Mini-WSB marking card; white; 10 strips with 10 markers/ card; 5 mm wide markers

plain	248-501	5
-------	---------	---



Mini-WSB marking card; white; 10 strips with 10 markers/ card; 5 mm wide markers

	264-900	5
--	---------	---



## Accessories; 264 Series

Appropriate marking systems: Mini-WSB/Mini-WSB Inline/T-marker tag

End and intermediate plate; 4 mm thick

orange	264-361	25
gray	264-364	25
light gray	264-363	25

Comb-style jumper bar; insulated; reduces maximum conductor size to 1.5 mm<sup>2</sup>; I<sub>N</sub> 16 A; gray

2-way	264-402	200 (25)
-------	---------	----------



Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

red	210-136	50
-----	---------	----



Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

yellow	210-137	50
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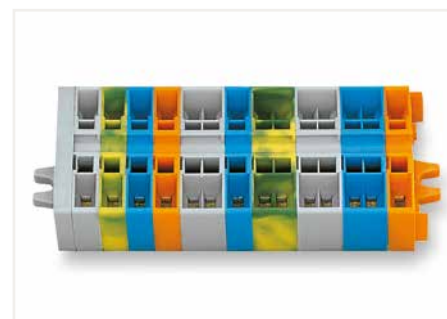
Operating tool; insulated

2-way	280-432	1
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T-marker tag; 30 markers per tag; up to 6 characters per marker; stretchable 5 ... 6 mm

plain	209-290	50
-------	---------	----



Terminal strip with mounting flanges, consisting of:

- End plate; with mounting flange
- Center terminal blocks
- End terminal block; with mounting flange

## Modular Terminal Block; with Snap-In Mounting Foot

### 2.5 mm<sup>2</sup>; 264 Series

#### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Terminal block width: 6 mm / 0.236 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	



#### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Terminal block width: 10 mm / 0.394 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	



\*12 AWG: THHN, THWN

- ① 800 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree
- ② Terminal blocks with a blue insulated housing are suitable for Ex i applications.
- ③ Terminal blocks with an Ex mark are suitable for Ex e II applications.  
0.5 ... 2.5 mm<sup>2</sup> / 20 ... 12 AWG\*  
690 V; 23 A

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

2-conductor center terminal block; required between end plate and end terminal block for terminal strips with mounting flanges

Color	Item No.	Pack. Unit
gray	264-311	100
blue	264-314 ②	100
orange	264-316	100
green-yellow	264-317	100
light gray	264-180 ③	100

#### Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	281-492	100 (25)
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Test plug module; snaps together; 6 mm wide

gray	249-136	100 (25)
------	---------	----------



Mini-WSB marking card; white; 10 strips with 10 markers/ card; 5 mm wide markers

plain	248-501	5
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4-conductor center terminal block; required between end plate and end terminal block for terminal strips with mounting flanges

Color	Item No.	Pack. Unit
gray	264-341	100
blue	264-344 ②	100
orange	264-346	100
green-yellow	264-347	100
light gray	264-280 ③	100

#### Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	280-492	200 (25)
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Test plug module; snaps together; 10 mm wide

gray	249-139	100 (25)
------	---------	----------



Mini-WSB marking card; white; 10 strips with 10 markers/ card; 5 mm wide markers

	264-900	5
--	---------	---



#### Accessories; 264 Series

Appropriate marking systems: Mini-WSB/Mini-WSB Inline/T-marker tag

End and intermediate plate; 4 mm thick

orange	264-371	25
gray	264-374	25
light gray	264-373	25

Comb-style jumper bar; insulated; reduces maximum conductor size to 1.5 mm<sup>2</sup>; I<sub>N</sub> 16 A; gray

2-way	264-402	200 (25)
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Operating tool; insulated

2-way	280-432	1
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Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

red	210-136	50
-----	---------	----



Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

yellow	210-137	50
--------	---------	----



Aluminum mounting rail; 1000 mm long; 18 mm wide; 7 mm high

210-154	1
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Plastic end stop; with WSB marker slot; for aluminum mounting rail (210-154); 6 mm wide

209-122	25
---------	----



T-marker tag; 30 markers per tag; up to 6 characters per marker; stretchable 5 ... 6 mm

plain	209-290	50
-------	---------	----



Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

210-720	1
---------	---

Terminal strip with mounting flanges, consisting of:  
End plate

- 4-conductor terminal strip; with snap-in mounting foot<sup>1)</sup>
- Center terminal blocks
- 2-conductor terminal strip; with snap-in mounting foot<sup>1)</sup>

<sup>1)</sup> at every 4th or 5th terminal block of the strip



## Terminal Strip; with Mounting Flanges or Snap-in Mounting Feet 2.5 mm<sup>2</sup>; 264 Series

### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Pole width: 6 mm / 0.236 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	

### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Pole width: 10 mm / 0.394 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	

### Technical Data

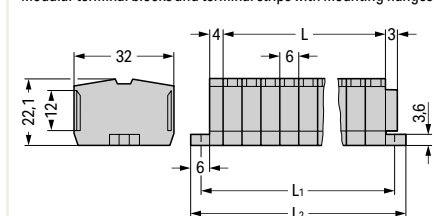
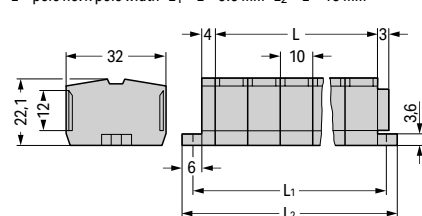
0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
690 V ②	300 V, 20 A ③
I <sub>N</sub> 23 A	600 V, 20 A ④
Pole width: 6 mm / 0.236 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	



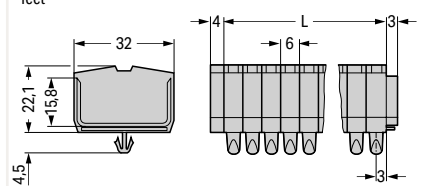
4

Dimensions in mm

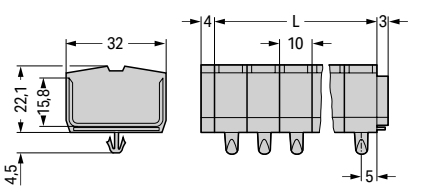
Modular terminal blocks and terminal strips with mounting flanges

L = pole no. x pole width L<sub>1</sub> = L + 9.6 mm L<sub>2</sub> = L + 16 mm

Modular terminal blocks and terminal strips with snap-in mounting feet



L = (pole no. x pole width) + 7 mm



2-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; gray

Pole No.	Item No.	Pack. Unit
2	264-102	100
3	264-103	100
4	264-104	100
5	264-105	100
6	264-106	100
7	264-107	100
8	264-108	100
9	264-109	50
10	264-110	50
11	264-111	50
12 ③	264-112	25

4-conductor terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; gray

Pole No.	Item No.	Pack. Unit
2	264-202	100
3	264-203	100
4	264-204	100
5	264-205	100
6	264-206	100
7	264-207	100
8	264-208	100
9	264-209	50
10	264-210	50
11	264-211	25
12 ③	264-212	25

2-conductor Ex e II terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; light gray

Pole No.	Item No.	Pack. Unit
2	264-132	100
3	264-133	100
4	264-134	100
5	264-135	100
6	264-136	100
7	264-137	100
8	264-138	100
9	264-139	50
10	264-140	50
11	264-141	25
12 ③	264-142	25

2-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; gray

Pole No.	Item No.	Pack. Unit
2	264-152	100
3	264-153	100
4	264-154	100
5	264-155	100
6	264-156	50
7	264-157	50
8	264-158	50
9	264-159	50
10	264-160	25
11	264-161	25
12 ③	264-162	25

4-conductor terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; gray

Pole No.	Item No.	Pack. Unit
2	264-252	100
3	264-253	100
4	264-254	100
5	264-255	100
6	264-256	50
7	264-257	50
8	264-258	50
9	264-259	50
10	264-260	25
11	264-261	25
12 ③	264-262	25

2-conductor Ex e II terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; light gray

Pole No.	Item No.	Pack. Unit
2	264-182	100
3	264-183	100
4	264-184	100
5	264-185	100
6	264-186	50
7	264-187	50
8	264-188	50
9	264-189	50
10	264-190	25
11	264-191	25
12 ③	264-192	25

## Technical Data

0.08 ... 2.5 mm<sup>2</sup> | 28 ... 12 AWG\*

690 V ② | 300 V, 20 A ③

I<sub>N</sub> 23 A | 600 V, 20 A ③

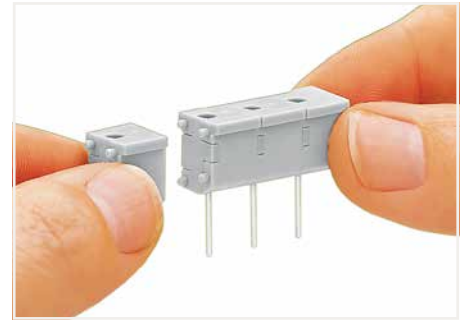
Pole width: 10 mm / 0.394 inch

8 ... 9 mm / 0.31 ... 0.35 inch



\*12 AWG: THHN, THWN

- ① 800 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree
- ② Suitable for Ex e II applications
- ③ Longer strips and/or mixed-color assemblies are available upon request.

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

Snapping individual modules together to assemble a multi-pole test plug module.



Item no. suffixes for gray terminal strips with mounting flanges:

264-102 to 264-112

264-202 to 264-212

blue .../000-006,

Terminal strips with a blue insulated housing are suitable for Ex i applications.



Item no. suffixes for gray terminal strips with snap-in mounting feet:

264-152 to 264-162

264-252 to 264-262

blue .../000-006,

Terminal strips with a blue insulated housing are suitable for Ex i applications.

4-conductor Ex e II terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter; light gray

Pole No.	Item No.	Pack. Unit
○ 2	264-232	100
○ 3	264-233	100
○ 4	264-234	100
○ 5	264-235	100
○ 6	264-236	100
○ 7	264-237	100
○ 8	264-238	100
○ 9	264-239	50
○ 10	264-240	50
○ 11	264-241	100
○ 12 ③	264-242	25



Ex e II terminal strip; with mounting flanges; for screw or similar mounting types; 3.2 mm mounting hole diameter



Ex e II terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter

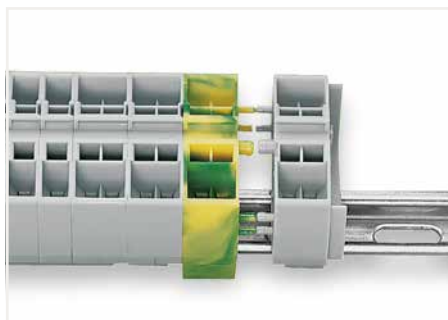
4-conductor Ex e II terminal strip; with snap-in mounting feet; for 0.6 ... 1.2 mm plate thickness; 3.5 mm mounting hole diameter; light gray

Pole No.	Item No.	Pack. Unit
○ 2	264-282	100
○ 3	264-283	100
○ 4	264-284	100
○ 5	264-285	100
○ 6	264-286	100
○ 7	264-287	50
○ 8	264-288	50
○ 9	264-289	50
○ 10	264-290	25
○ 11	264-291	25
○ 12 ③	264-292	25

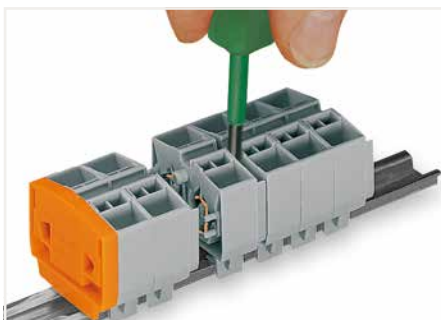
## Rail-Mount Terminal Blocks Mini; for DIN-15 and DIN-35 Rails

### 264 Series

### Description and Installation



Quick assembly keys prevent reverse mounting.



Separate terminal strip and slide individual terminal block laterally.



Remove terminal block from the DIN-rail with a levering action.

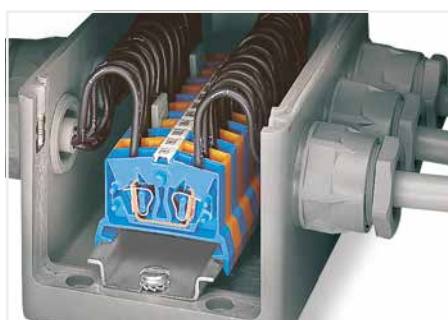
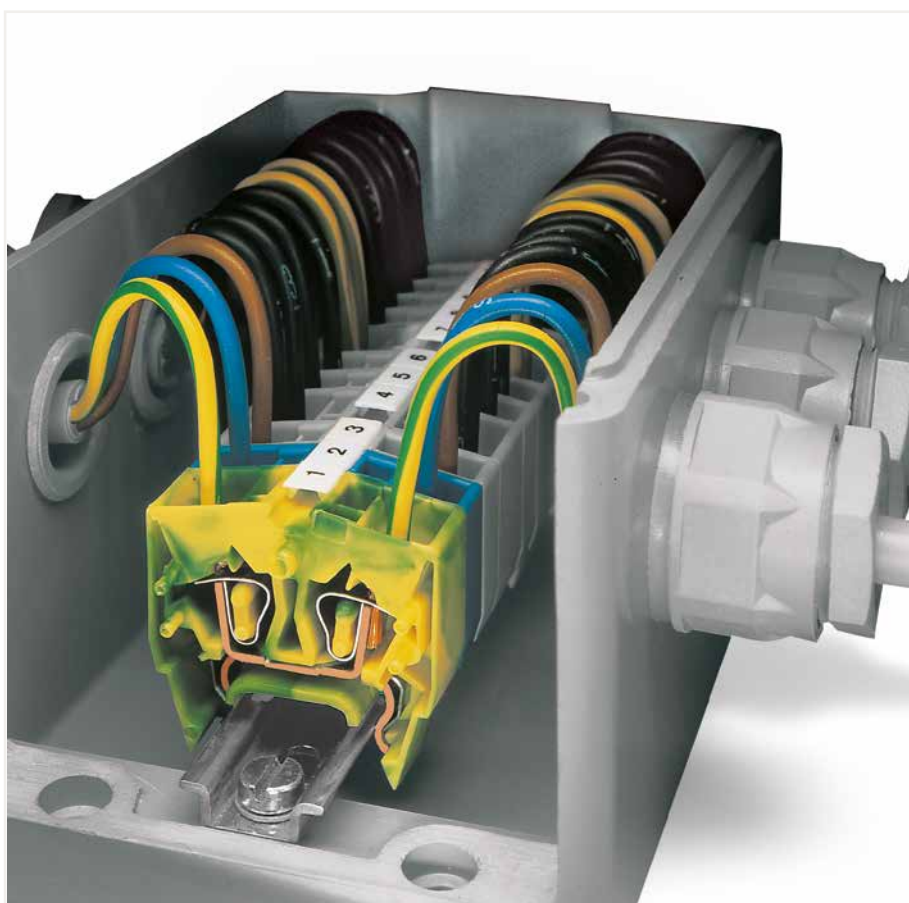
4



Commoning with comb-style jumper bar.



Commoning with comb-style jumper bar.



Easy-to-use miniature blocks that require minimal enclosure space.



Combining 2- and 4-conductor terminal blocks.



Marking via Mini-WSB Quick Marking System.



CAGE CLAMP® terminates the following copper conductors:  
solid



stranded



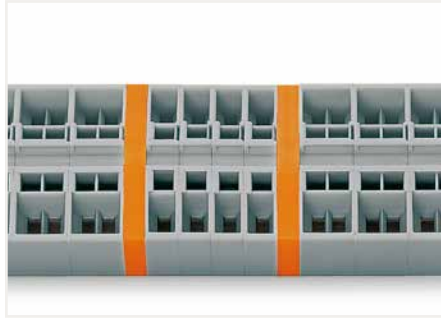
fine-stranded,  
also with tinned  
single strands



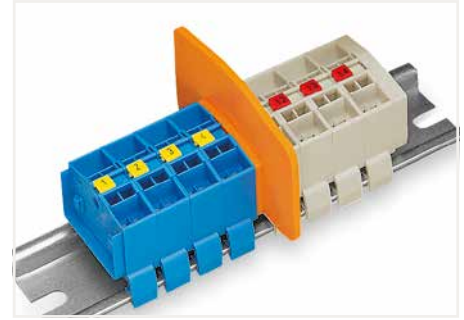
**CAGE CLAMP® termination:**

Inserting a conductor.

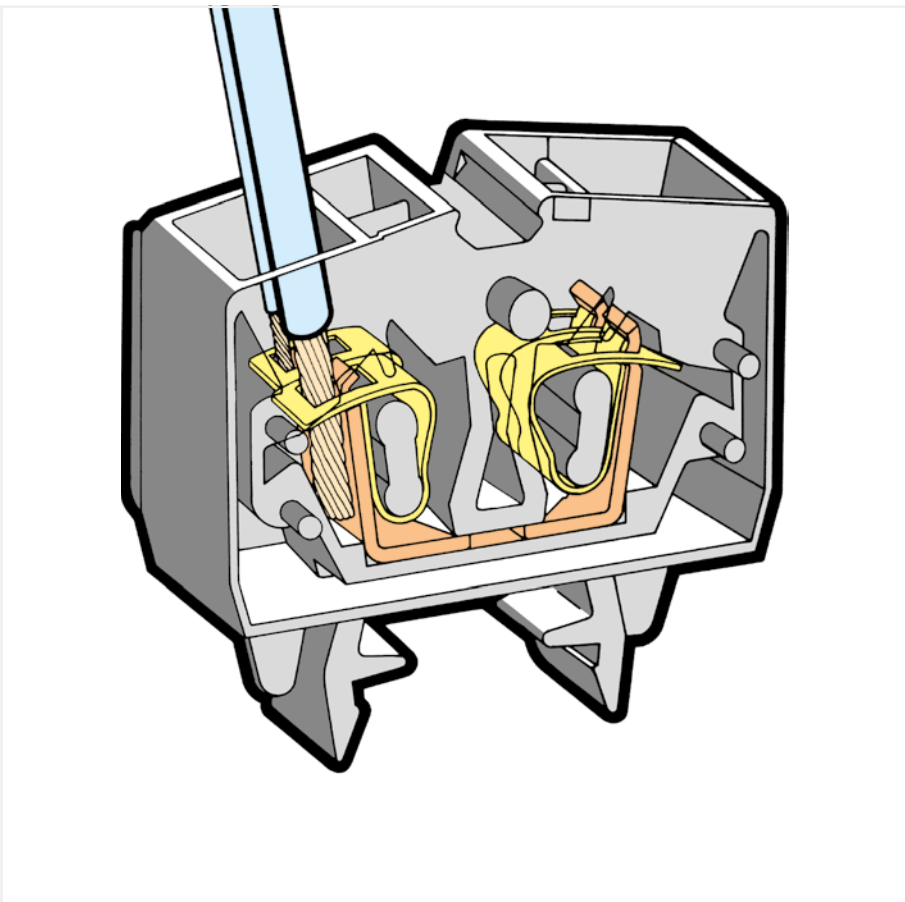
With ferruled conductors, it is necessary to use a terminal block one size smaller than the conductor's nominal cross section.



Separating groups via intermediate plates.



Ex e/Ex i separator plate for miniature rail-mount terminal blocks



Testing by touch contact to the CAGE CLAMP® spring (limited to 0.5 A and 48 V test voltage) – test pins are not protected against accidental contact.



Testing via CAGE CLAMP® on the current bar (max. nominal current: 6 A) – CAGE CLAMP® clamps individual test contacts. The maximum test voltage is 400 V.



Marking with T-marker tag (209-290).



fine-stranded,  
tip-bonded



fine-stranded,  
with ferrule  
(gastight crimped)



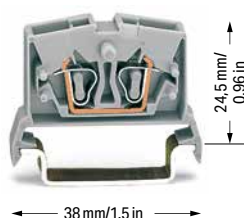
fine-stranded,  
with pin terminal  
(gastight crimped)

## Miniature Through/Ground Conductor and Ex Terminal Block; for DIN-35 Rail

### 2.5 mm<sup>2</sup>; 264 Series

#### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Terminal block width: 6 mm / 0.236 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	



#### 2-conductor miniature through terminal block; for DIN-35 rail

Color	Item No.	Pack. Unit
gray	264-711	100
blue	264-714 ②	100
orange	264-716	100
light gray ③	264-125 ③	100

#### Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	281-492	100 (25)
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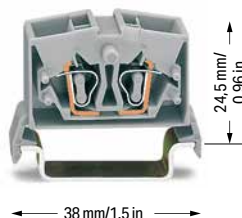
#### Test plug module; snaps together; 6 mm wide

gray	249-136	100 (25)
------	---------	----------



#### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Terminal block width: 10 mm / 0.394 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	



#### 4-conductor miniature through terminal block; for DIN-35 rail

Color	Item No.	Pack. Unit
gray	264-731	100
blue	264-734 ②	100
orange	264-736	100
light gray ③	264-225 ③	100

#### Accessories; item-specific

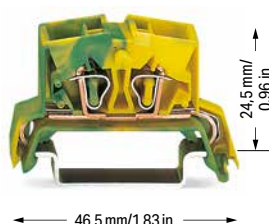
Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	280-492	200 (25)
-------	---------	----------



#### Test plug module; snaps together; 10 mm wide

gray	249-139	100 (25)
------	---------	----------



#### 4-conductor miniature ground terminal block; for DIN-35 rail

Color	Item No.	Pack. Unit
green-yellow	264-737	100
green-yellow ③	264-737/999-950 ③	100

#### Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	280-492	200 (25)
-------	---------	----------



#### Test plug module; snaps together; 10 mm wide

gray	249-139	100 (25)
------	---------	----------



#### \*12 AWG: THHN, THWN

- 800 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree
- Terminal blocks with a blue insulated housing are suitable for Ex i applications.
- Terminal blocks with an Ex mark are suitable for Ex e II applications.  
0.5 ... 2.5 mm<sup>2</sup> / 20 ... 12 AWG\*  
690 V; 23 A

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

#### Accessories; 264 Series

Appropriate marking systems:  
Mini-WSB/Mini-WSB Inline/T-marker tag

#### End and intermediate plate; 4 mm thick

orange	264-369	25
gray	264-368	25
light gray	264-370	25

#### Ex e/Ex i separator; orange; 4 mm thick

66 mm	264-367	25
-------	---------	----

Comb-style jumper bar; insulated; reduces maximum conductor size to 1.5 mm<sup>2</sup>; I<sub>N</sub> 16 A; gray

2-way	264-402	200 (25)
-------	---------	----------

#### Operating tool; insulated

2-way	280-432	1
-------	---------	---

#### Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

red	210-136	50
-----	---------	----

#### Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

yellow	210-137	50
--------	---------	----

Mini-WSB marking card; white; 10 strips with 10 markers/ card; 5 mm wide markers

plain	248-501	5
-------	---------	---

#### Screwless end stop; for DIN-35 rail; 6 mm wide

gray	249-116	100 (25)
------	---------	----------

Steel DIN-rail; per EN 60715; 35 x 7.5 mm; 1 mm thick; 2 m long

slotted	210-112	10 (1)
unslotted	210-113	10

Aluminum DIN-rail; similar to EN 60715; 35 x 8.2 mm; 1.6 mm thick; 2 m long

unslotted	210-196	10
-----------	---------	----

## Miniature Through/Ground Conductor and Ex Terminal Block; for DIN-15 Rail

### 2.5 mm<sup>2</sup>; 264 Series

#### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Terminal block width: 6 mm / 0.236 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	



← 32 mm / 1.26 in →

#### 2-conductor miniature through terminal block; for DIN-15 rail

Color	Item No.	Pack. Unit
gray	264-701	100
blue	264-704 ②	100
orange	264-706	100
light gray ③	264-120 ③	100

#### Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	281-492	100 (25)
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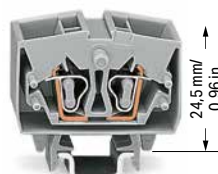
#### Test plug module; snaps together; 6 mm wide

gray	249-136	100 (25)
------	---------	----------



#### Technical Data

0.08 ... 2.5 mm <sup>2</sup>	28 ... 12 AWG*
800 V/8 kV/3 ①	300 V, 20 A ②
I <sub>N</sub> 24 A	600 V, 20 A ③
Terminal block width: 10 mm / 0.394 inch	
8 ... 9 mm / 0.31 ... 0.35 inch	



← 32 mm / 1.26 in →

#### 4-conductor miniature through terminal block; for DIN-15 rail

Color	Item No.	Pack. Unit
gray	264-721	100
blue	264-724 ②	100
orange	264-726	100
light gray ③	264-220 ③	100

#### Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	280-492	200 (25)
-------	---------	----------



#### Test plug module; snaps together; 10 mm wide

gray	249-139	100 (25)
------	---------	----------



← 32 mm / 1.26 in →

#### 4-conductor miniature ground terminal block; for DIN-15 rail

Color	Item No.	Pack. Unit
green-yellow	264-727	100
green-yellow ③	264-727/999-950 ③	100

#### Accessories; item-specific

Alternate comb-style jumper bar; insulated; I<sub>N</sub> = I<sub>N</sub> of terminal block

2-way	280-492	200 (25)
-------	---------	----------



#### Test plug module; snaps together; 10 mm wide

gray	249-139	100 (25)
------	---------	----------



#### \*12 AWG: THHN, THWN

- 800 V = rated voltage  
8 kV = rated impulse voltage  
3 = pollution degree
- Terminal blocks with a blue insulated housing are suitable for Ex i applications.
- Terminal blocks with an Ex mark are suitable for Ex e II applications.  
0.5 ... 2.5 mm<sup>2</sup> / 20 ... 12 AWG\*  
690 V; 23 A

Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)

#### Accessories; 264 Series

Appropriate marking systems:  
Mini-WSB/Mini-WSB Inline/T-marker tag

#### End and intermediate plate; 4 mm thick

orange	264-369	25
gray	264-368	25
light gray	264-370	25

#### Ex e/Ex i separator; orange; 4 mm thick

66 mm	264-367	25
-------	---------	----



Comb-style jumper bar; insulated; reduces maximum conductor size to 1.5 mm<sup>2</sup>; I<sub>N</sub> 16 A; gray

2-way	264-402	200 (25)
-------	---------	----------



#### Operating tool; insulated

2-way	280-432	1
-------	---------	---



#### Operating tool; insulated

1-way	209-130	1
-------	---------	---



#### Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

red	210-136	50
-----	---------	----



#### Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

yellow	210-137	50
--------	---------	----



#### Screwless end stop; for DIN-15 rail; 6 mm wide

gray	249-101	25
------	---------	----



Steel DIN-rail; per EN 60715; 15 x 5.5 mm; 1 mm thick; 2 m long

slotted	210-111	10 (1)
unslotted	210-295	10 (1)



Aluminum DIN-rail; similar to EN 60715; 15 x 5.5 mm; 1 mm thick; 2 m long

unslotted	210-296	1
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## WAGO Lighting Terminal Blocks and Connectors for Lineact®

WAGO Lighting Terminal Blocks and Connectors for Linect®

			Page
	Lighting Terminal Blocks for Linect®	294 Series	168
	Connectors for Linect® T-Connectors for Linect®	770 Series	176

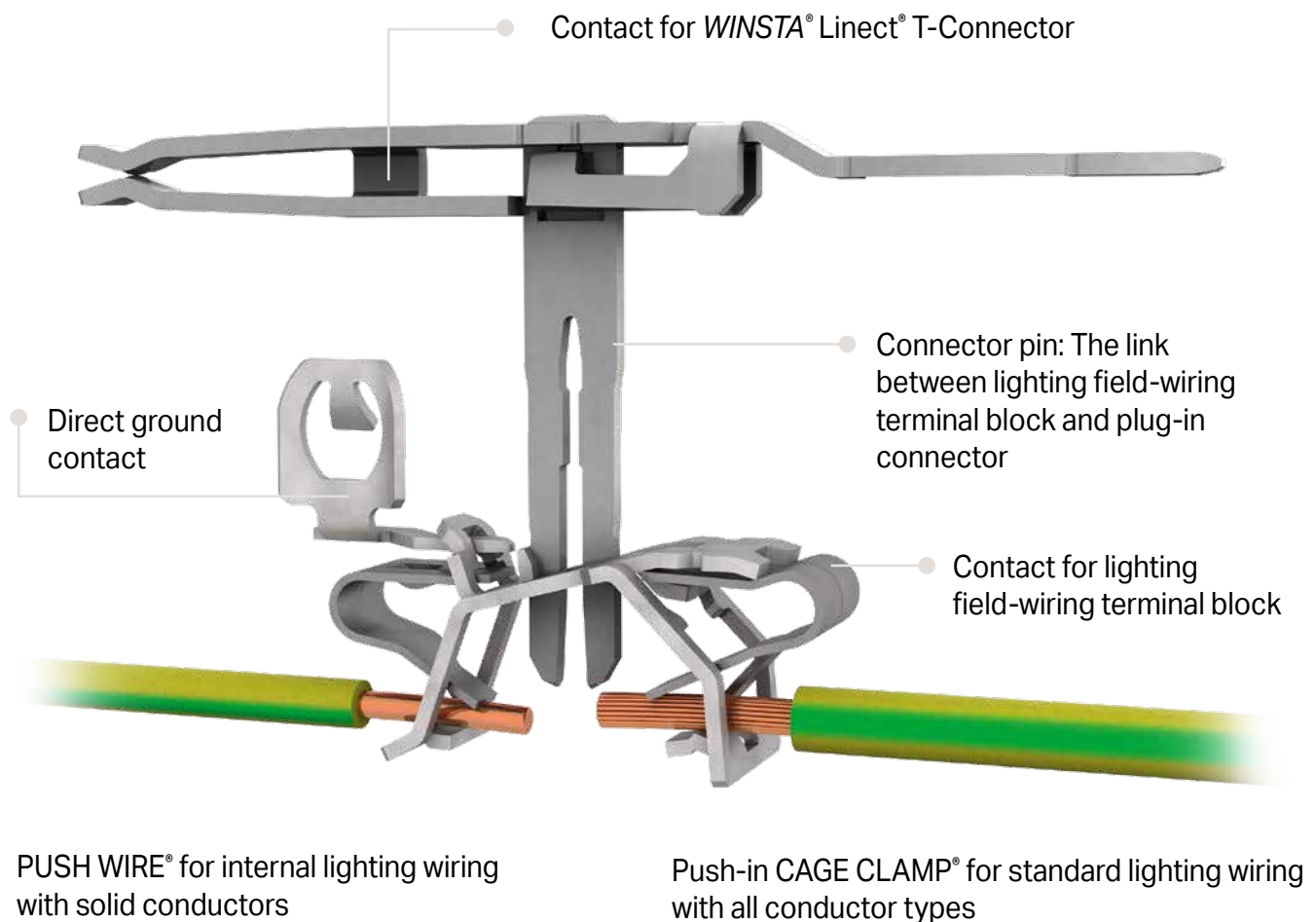
## For Universal Lighting Connections

### Linect®; 294 Series

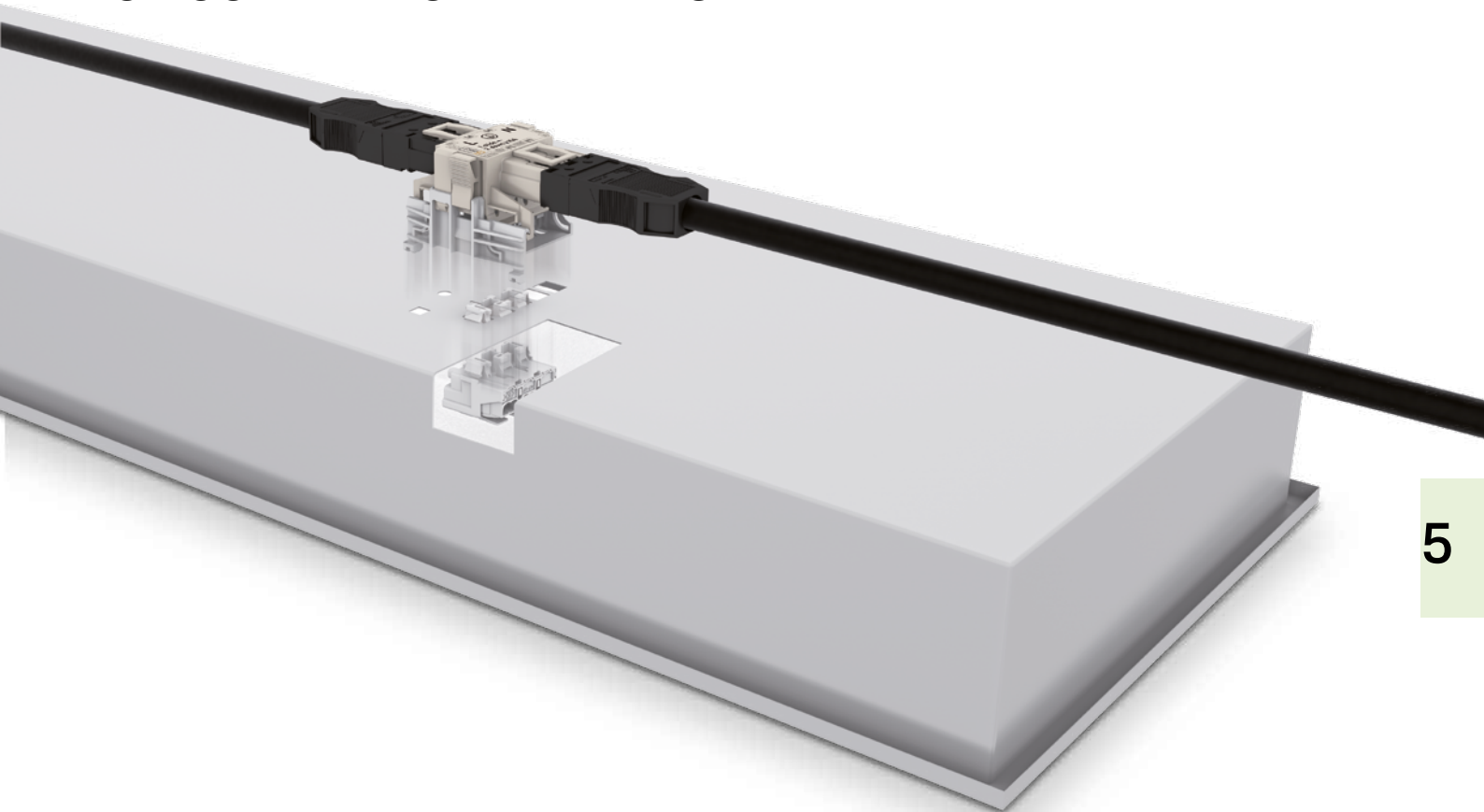
Lights offered under the Linect® name permit both conventional field-wiring and pluggable connections. Linect®-branded interfaces can be used by any lighting manufacturer worldwide. This enables lights carrying the Linect® logo to be connected to any Linect®-marked connectors – regardless of manufacturer!

### Contact Technology with Linect® Interface:

5



# PLUGGABLE ELECTRICAL INSTALLATION OR CONVENTIONAL WIRING?



5

## Linect® DOES IT ALL!

### Modern Lights Need Modern, Pluggable Connections

The modern connection system for lighting installation has a name – Linect®. Lights with a Linect® interface provide connections for both conventional field-wiring terminal blocks and pluggable connectors – regardless of the manufacturer. Modern, pluggable electrical installation with Linect® enables fast and easy installation of recessed luminaires with various pluggable connector systems.

As lighting manufacturers, planners and electricians, you will benefit from Linect® – the universal light connection system.

## Lighting Terminal Blocks

### Description and Installation

#### Linect®; 294 Series



WAGO's 294 Series Lighting Terminal Blocks allow worldwide connection of luminaires via WINSTA® Pluggable Connectors or conventional wiring.

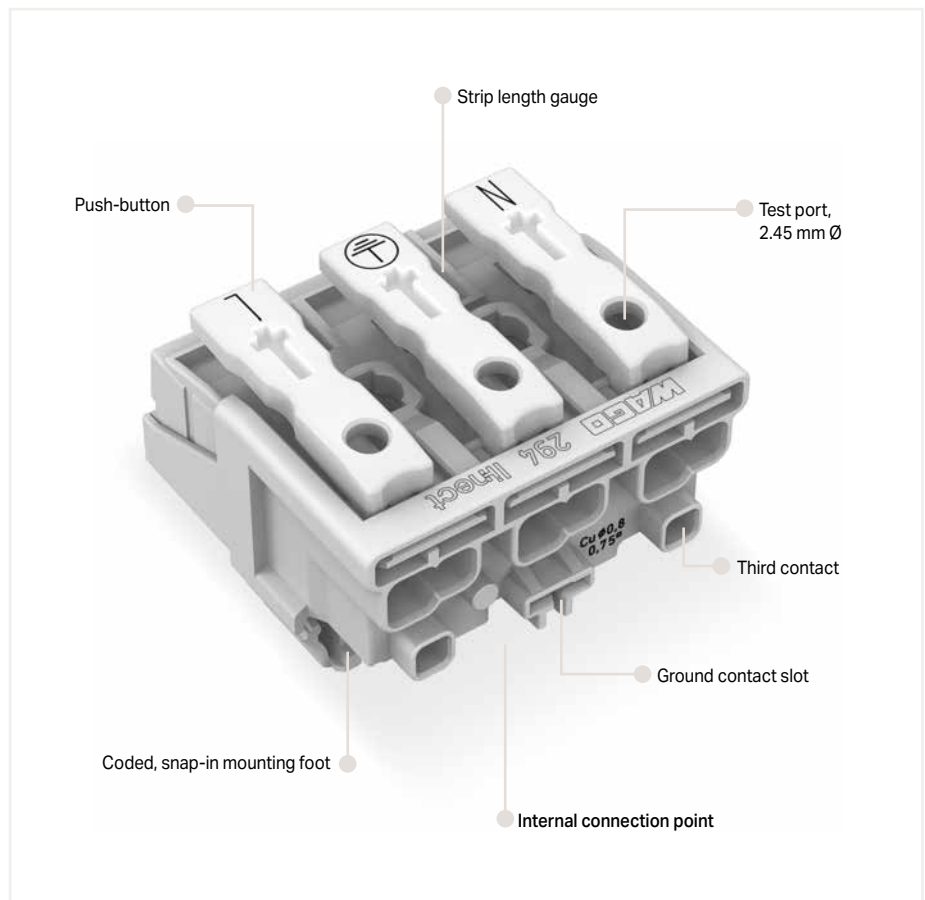


WAGO Linect® Lighting Terminal Blocks are ideal for connecting additional consumers that were not originally planned (e.g., spots). The maximum current between WINSTA® Linect® T-Connector and Lighting Terminal Block is 16 A.

5



Integrated strip length gauge



Position the T-connector within the two square recesses.



Move the T-connector toward the square cutouts until it is locked in position.



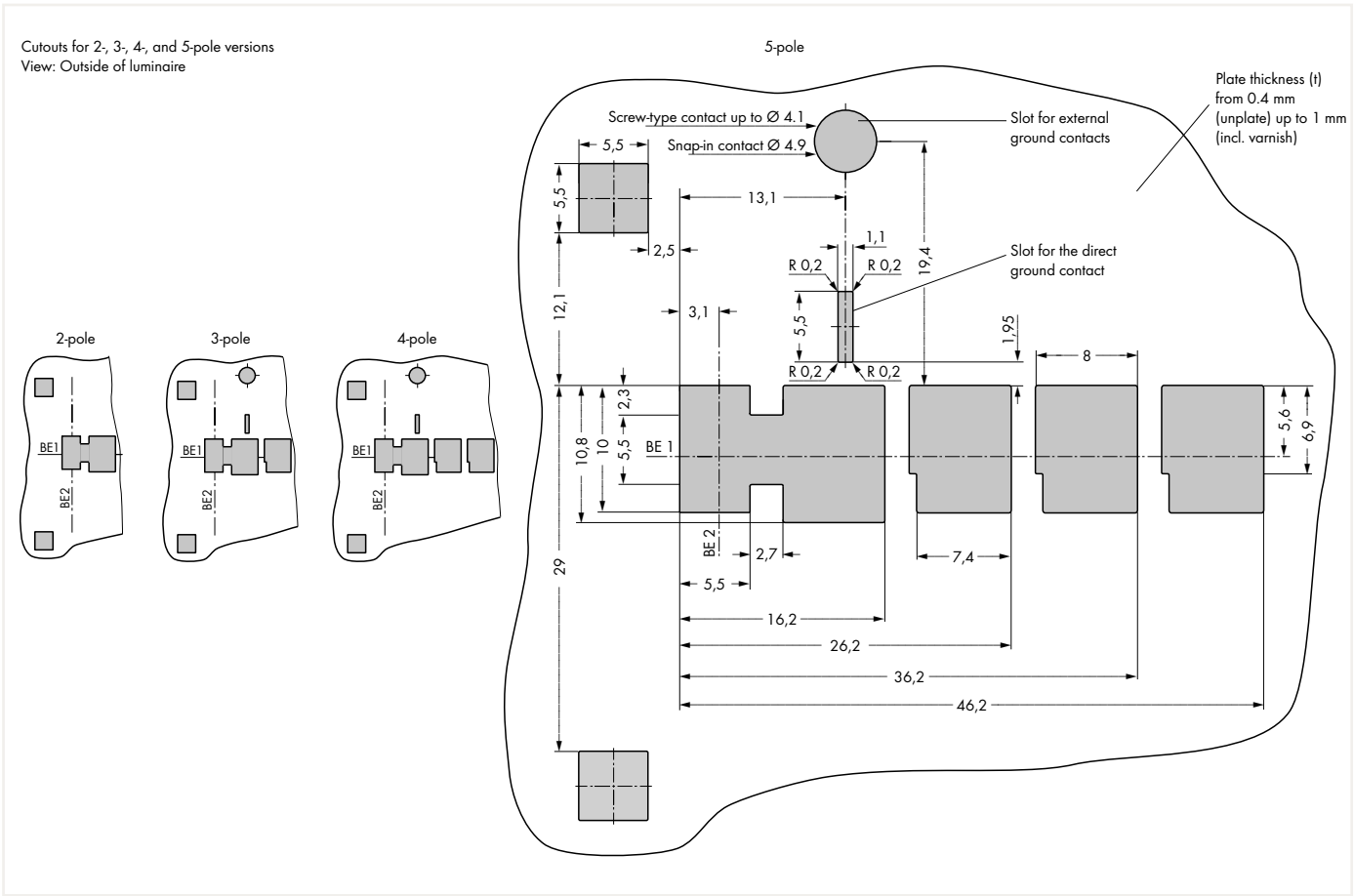
Push connector down until fully engaged – done!

Description and Installation

Linect®; 294 Series

Pole No.	Marking	Without GND contact	With direct GND contact	With screw-type GND contact	With snap-in GND contact	With angled snap-in GND contact
2	N' L' DA+ DA-	Item No. 294-8022 294-8032	Item No. -	Item No. -	Item No. -	Item No. -
3	N ⊕ L (mains) N E L	294-8013 294-8093/3025-000	294-8113 -	294-8413 -	294-8213 -	294-8313 -
4	1/L' 2/L ⊕ N 1/L' 2/L E N	294-8024 294-8094/4025-000	294-8124 -	294-8424 -	294-8224 -	294-8324 -
5	DA+ DA- L ⊕ N L' N' L ⊕ N L3 L2 L1 ⊕ N DA+ DA- L E N L3 L2 L1 E N L' N' L E N	294-8035 294-8025 294-8015 294-8095/5025-000 294-8095/5026-000 294-8095/5027-000	294-8135 294-8125 294-8115 - - -	294-8435 294-8425 294-8415 - - -	294-8235 294-8225 294-8215 - - -	294-8335 294-8325 294-8315 - - -

5



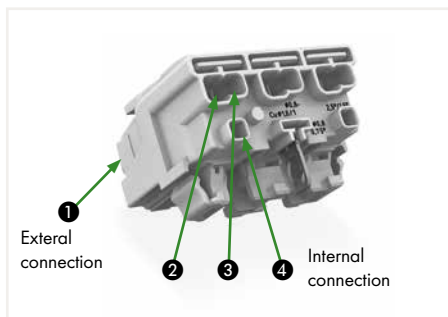


## Lighting Terminal Block

### Linect®; 294 Series



- External connection of solid, stranded and fine-stranded conductors
- Universal conductor termination (AWG, metric)
- Third contact located at the bottom of internal connection end
- Strain relief plate can be retrofitted



Electrical Data	Linect® Connector		
Ratings per	IEC/EN 60998-1	IEC/EN 60998-2-2	IEC/EN 60664-1
Overvoltage category	II	II	II
Pollution degree	2	2	2
Rated voltage	500 V	500 V	500 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	24 A	24 A	16 A
Temperature marking	T 85	T 85	
Degree of protection			IP 2 XC
Storage temperature			-35 ... +85 °C
Processing temperature			-5 ... +40 °C

Connection Data for External Connection	
Connection technology	Push-in CAGE CLAMP®
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor range (conductor termination ❶)	
Solid, stranded or fine-stranded conductor	2 x 0.5 ... 2.5 mm²
Solid, stranded or fine-stranded conductor; with ferrule	2 x 0.5 ... 1.5 mm²
Solid conductor (AWG)	2 x 18 ... 12
Fine-stranded and stranded conductor (AWG)	2 x 18 ... 14

Connection Data for Internal Connection	
Connection technology	PUSH WIRE®
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor range (conductor termination ❷)	
Solid conductor	0.5 ... 2.5 mm² / 18 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 1.5 mm²
Fine-stranded conductor; with insulated ferrule	0.5 ... 1 mm²
Conductor range (conductor termination ❸)	
Solid conductor	0.5 ... 1.5 mm² / 18 ... 16 AWG
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 1 mm²
Fine-stranded conductor; with insulated ferrule	0.5 ... 0.75 mm²
Conductor range (conductor termination ❹)	
Solid conductor	0.5 ... 0.75 mm² / 18 AWG

Material Data	
Material group	IIIa
Insulation material	Polycarbonate (PC)
Flammability class per UL94	V0
Temperature stability	Relative Temperature Index (RTI) of 120°C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

PUSH-IN CAGE CLAMP®

PUSH WIRE®

Lighting Terminal Block; 2-Pole

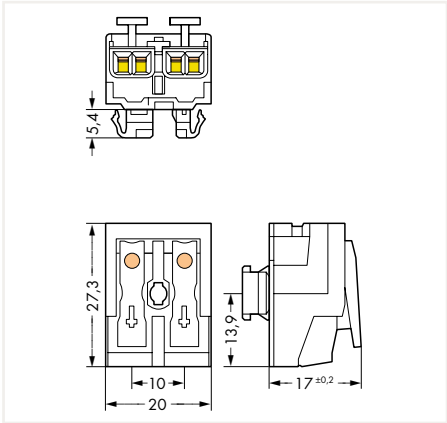
Linect®; 294 Series

Without GND contact



Marking	Item No.	Pack. Unit
N' L'	294-8022	1000
DA+ DA-	294-8032	1000

Dimensions (in mm):



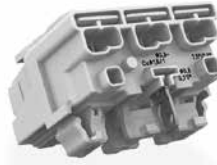
5

## Lighting Terminal Block; 3-Pole Linect®; 294 Series

Without GND contact



With direct GND contact

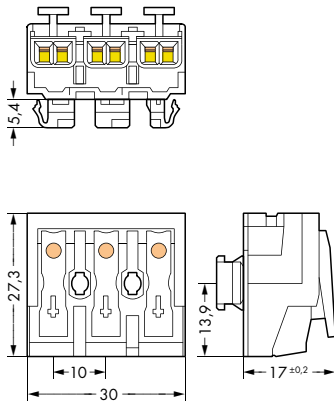


With screw-type GND contact



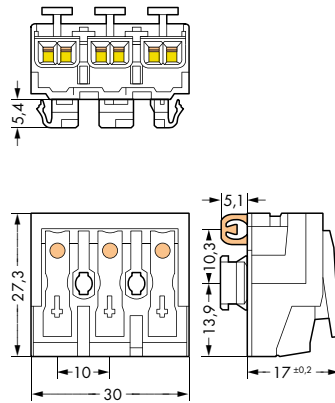
Marking	Item No.	Pack. Unit
N ⊕ L (mains)	294-8013	500
N E L	294-8093/3025-000	500

Dimensions (in mm):



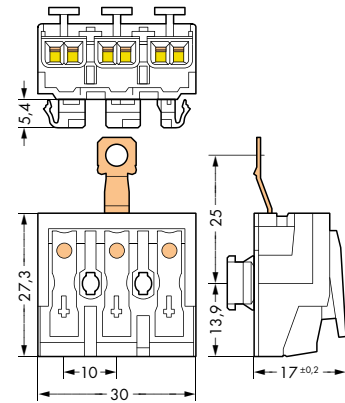
Marking	Item No.	Pack. Unit
N ⊕ L (mains)	294-8113	500

Dimensions (in mm):



Marking	Item No.	Pack. Unit
N ⊕ L (mains)	294-8413	500

Dimensions (in mm):

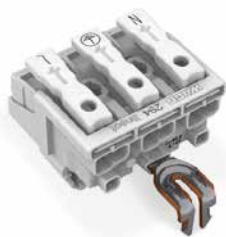


PUSH-IN CAGE CLAMP®

PUSH WIRE®

Lighting Terminal Block; 3-Pole  
Linect®; 294 Series

With snap-in GND contact



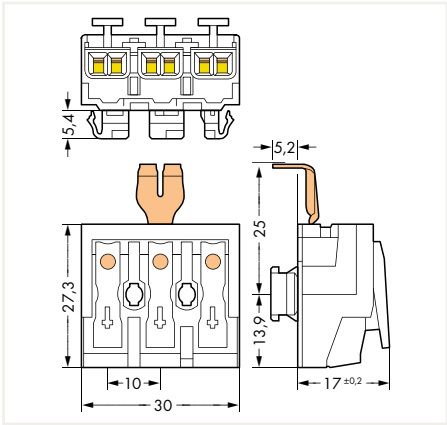
With angled snap-in GND contact



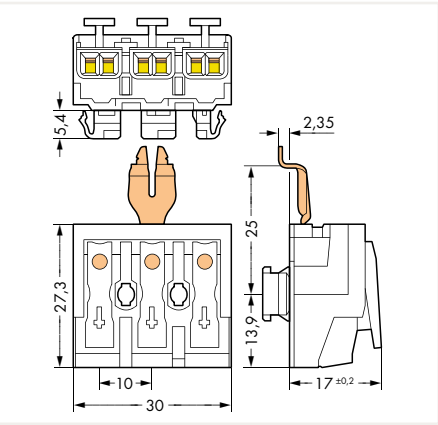
Marking	Item No.	Pack. Unit
N Ⓢ L (mains)	294-8213	500

Marking	Item No.	Pack. Unit
N Ⓢ L (mains)	294-8313	500

Dimensions (in mm):



Dimensions (in mm):



## Lighting Terminal Block; 4-Pole Linect®; 294 Series

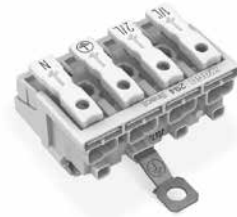
Without GND contact



With direct GND contact



With screw-type GND contact

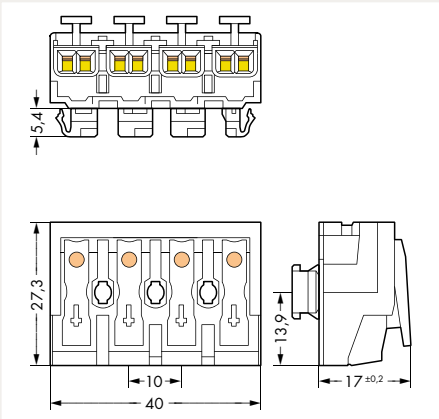


Marking	Item No.	Pack. Unit
1/L' 2/L' ⊕ N	294-8024	500
1/L' 2/L' E N	294-8094/4025-000	500

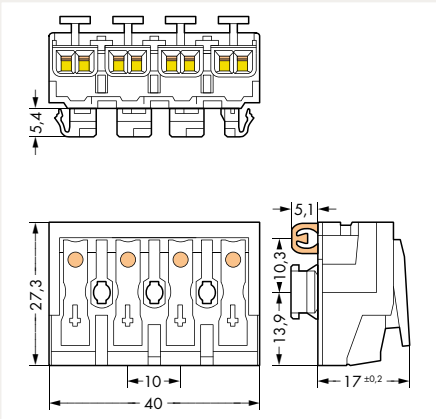
Marking	Item No.	Pack. Unit
1/L' 2/L' ⊕ N	294-8124	500

Marking	Item No.	Pack. Unit
1/L' 2/L' ⊕ N	294-8424	500

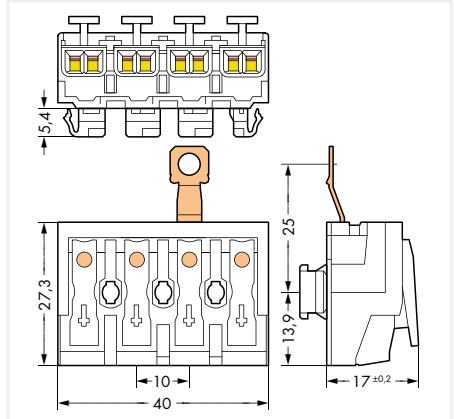
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



PUSH-IN CAGE CLAMP®

PUSH WIRE®

Lighting Terminal Block; 4-Pole  
Linect®; 294 Series

With snap-in GND contact

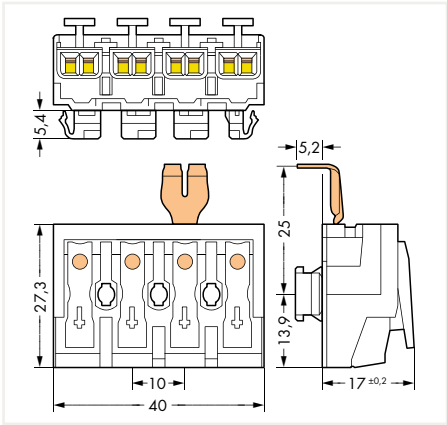
With angled snap-in GND contact



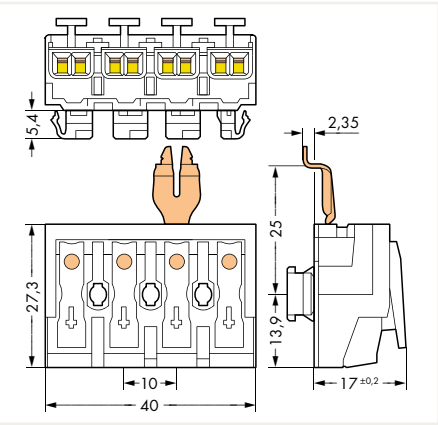
Marking	Item No.	Pack. Unit
1/L' 2/L' ⊕ N	294-8224	500

Marking	Item No.	Pack. Unit
1/L' 2/L' ⊕ N	294-8324	500

Dimensions (in mm):



Dimensions (in mm):



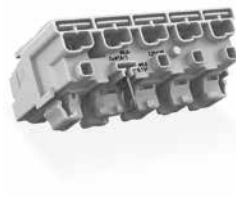


## Lighting Terminal Block; 5-Pole Linect®; 294 Series

Without GND contact



With direct GND contact



With screw-type GND contact

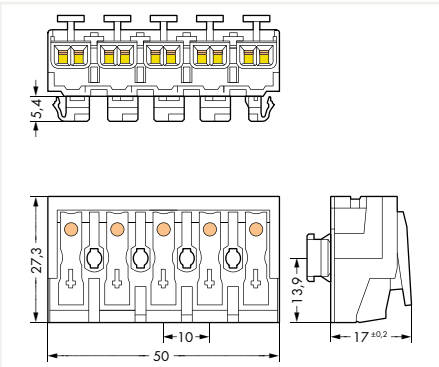


Marking	Item No.	Pack. Unit
DA+ DA- L ⊕ N	294-8035	250
L' N' L ⊕ N	294-8025	250
L3 L2 L1 ⊕ N	294-8015	250
DA+ DA- L E N	294-8095/5025-000	250
L3 L2 L1 E N	294-8095/5026-000	250
L' N' L E N	294-8095/5027-000	250

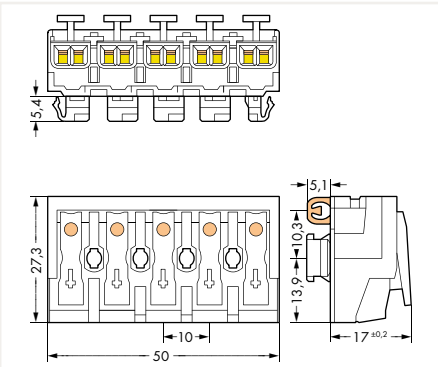
Marking	Item No.	Pack. Unit
DA+ DA- L ⊕ N	294-8135	250
L' N' L ⊕ N	294-8125	250
L3 L2 L1 ⊕ N	294-8115	250

Marking	Item No.	Pack. Unit
DA+ DA- L ⊕ N	294-8435	250
L' N' L ⊕ N	294-8425	250
L3 L2 L1 ⊕ N	294-8415	250

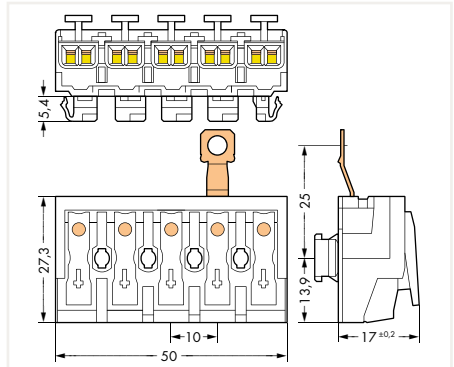
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



PUSH-IN CAGE CLAMP®

PUSH WIRE®

Lighting Terminal Block; 5-Pole

Linect®; 294 Series

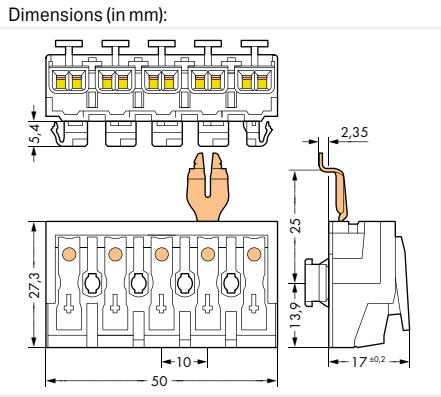
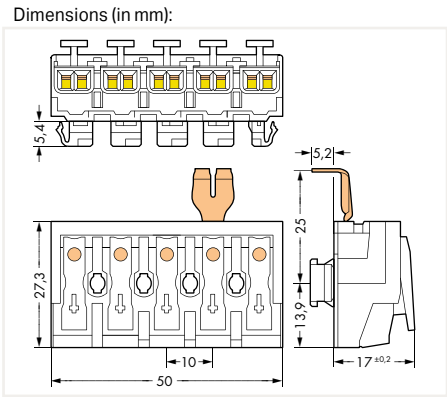
With snap-in GND contact

With angled snap-in GND contact



Marking	Item No.	Pack. Unit
DA+ DA- L ⊕ N	294-8235	250
L' N' L ⊕ N	294-8225	250
L3 L2 L1 ⊕ N	294-8215	250

Marking	Item No.	Pack. Unit
DA+ DA- L ⊕ N	294-8335	250
L' N' L ⊕ N	294-8325	250
L3 L2 L1 ⊕ N	294-8315	250



## Linect® Connector for Conventional Wiring; 3-Pole 770 Series



- Linect® Connectors for conventional, external wiring
- Push-in CAGE CLAMP® for all conductor types up to 2.5 mm<sup>2</sup>
- Quick and easy replacement of lights for maintenance or retrofits
- Opening the light is not necessary

5

Electrical Data	Push-in CAGE CLAMP® connection	Linect® Connector
Ratings per	IEC/EN 61984	IEC/EN 61984
Overvoltage category	II	II
Pollution degree	2	2
Rated voltage	250 V	250 V
Rated surge voltage	4 kV	4 kV
Rated current	24 A	16 A
Degree of protection	IP 2 XC	IP 2 XC
Storage temperature	-35 ... +85 °C	-35 ... +85 °C
	-5 ... +40 °C	-5 ... +40 °C

Connection Data for External Connection	
Connection technology	Push-in CAGE CLAMP®
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor range (conductor termination ①)	
Solid, stranded or fine-stranded conductor	2 x 0.5 ... 2.5 mm <sup>2</sup>
Solid, stranded or fine-stranded conductor; with ferrule	2 x 0.5 ... 2.5 mm <sup>2</sup>
Solid conductor (AWG)	2 x 20 ... 12
Fine-stranded and stranded conductor (AWG)	2 x 18 ... 14

Material Data	
Material group	IIIa
Insulation material	Polycarbonate (PC)
Flammability class per UL94	V0
Temperature stability	Relative Temperature Index (RTI) of 120°C
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact Material	Electrolytic copper (E <sub>cu</sub> )
Contact plating	Tin-plated

Linect® Connector for Conventional Wiring; 3-Pole

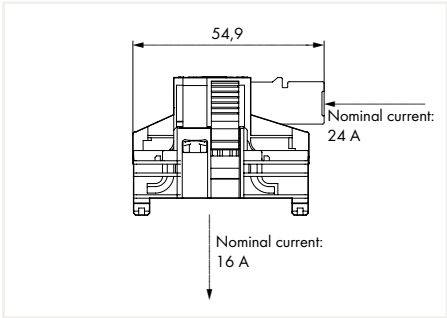
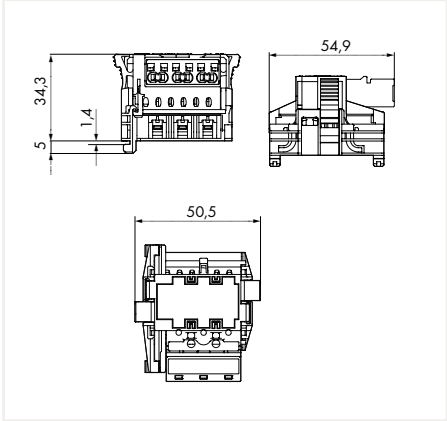
770 Series

Linect® Connector; 3-pole



Color	Item No.	Pack. Unit
○ white	770-6229	25

Dimensions (in mm):



3-pole
○ white      A-coding      (L ⊕ N)

Accessories; item-specific

Strain relief housing; for 1 cable; 4.5 ... 8 mm diameter

	black	770-503/023-000	50
	white	770-513/023-000	50

Strain relief housing; for 2 cables; 8 ... 11.5 mm diameter

	black	770-503	50
	white	770-513	50

Strain relief housing; angled; for 2 cables; 8 ... 11.5 mm diameter

	black	770-503/032-000	50
	white	770-513/032-000	50

Strain relief housing; for 4 mm² cables; for 1 cable; 9 ... 13 mm diameter

	black	770-503/021-000	50
	white	770-513/021-000	50

Strain relief housing; for quick assembly; for 1 cable; 7 ... 11 mm diameter

	black	770-503/035-000	50
	white	770-513/035-000	50

## WINSTA® MIDI

### Linect® T-Connector, 2-, 3- and 4-Pole

#### 770 Series

##### Technical Data

250 V / 4 kV / 3

 $I_N$  25 A (16 A)

##### Technical Data

250 V / 4 kV / 3

 $I_N$  25 A (16 A)

##### Technical Data

400 V / 6 kV / 3

 $I_N$  25 A (16 A)

Linect® T-Connector; 2-pole; socket – plug;  
white housing; blue cover; for DALI applications

Color	Item No.	Pack. Unit
● blue	770-7102	25

Linect® T-Connector; 3-pole; socket – plug;  
white housing; white cover

Color	Item No.	Pack. Unit
○ white	770-6223	25

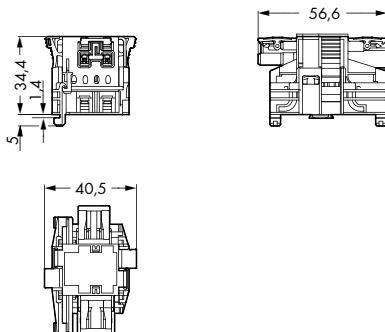
Linect® T-Connector; 4-pole; socket – plug;  
white housing; white cover

Color	Item No.	Pack. Unit
○ white	770-6224	25

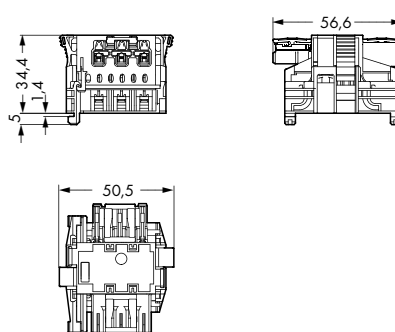
Linect® T-Connector; 2-pole; socket – plug;  
white housing; dark gray cover; for emergency power

Color	Item No.	Pack. Unit
● dark gray	770-7502	25

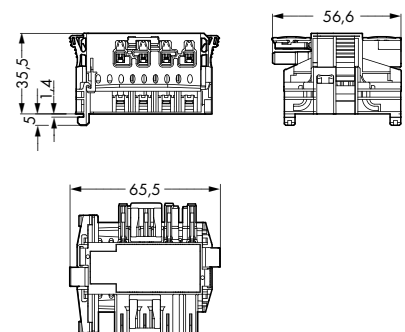
Dimensions (in mm):



Dimensions (in mm):



Dimensions (in mm):



##### Accessories; item-specific

Coding pin; for plug (A- and B-coding)

gray	770-401	1000
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##### Accessories; item-specific

Coding pin; for plug (A- and B-coding)

gray	770-401	1000
------	---------	------

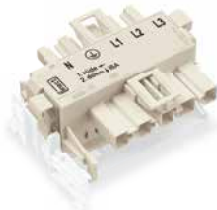


WINSTA® MIDI

Linect® T-Connector, 5-Pole

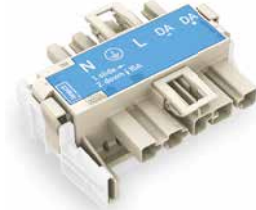
770 Series

Technical Data		
400 V / 6 kV / 3		
I <sub>N</sub> 25 A (16 A)		



Linect® T-Connector; 5-pole; socket – plug; white housing; white cover		
Color	Item No.	Pack. Unit
○ white	770-6225	25

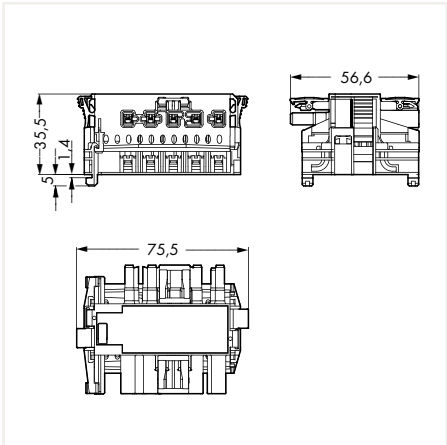
Technical Data		
400 V / 6 kV / 3		
I <sub>N</sub> 25 A (16 A)		



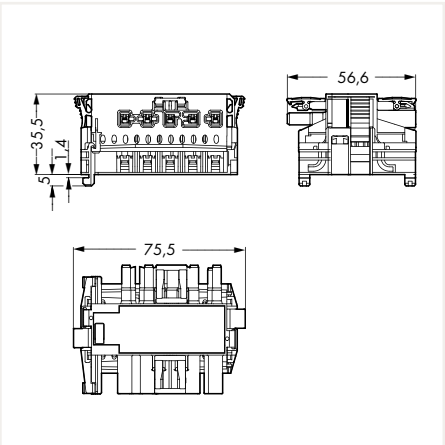
Linect® T-Connector; 5-pole; socket – plug; white housing; blue cover; for DALI applications		
Color	Item No.	Pack. Unit
● blue	770-7105	25

Linect® T-Connector; 5-pole; socket – plug; white housing; dark gray cover; for emergency power		
Color	Item No.	Pack. Unit
● dark gray	770-7505	25


Dimensions (in mm):




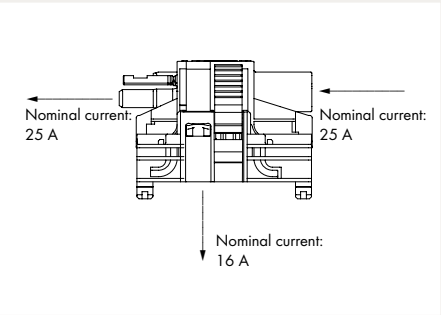
Dimensions (in mm):



2-pole		
● blue	I-coding	(DA+ DA-)
● dark gray	L-coding	(L' N')
3-pole		
○ white	A-coding	(L ⊕ N)
4-pole		
○ white	A-coding	(N ⊕ 2/L 1/L')
5-pole		
○ white	A-coding	(N ⊕ L1 L2 L3)
● blue	I-coding	(N ⊕ L DA- DA+)
● dark gray	L-coding	(N ⊕ L N' L')

Accessories			
Lockout cap; for socket; separable; 12-pole			
	black	770-201	100
	white	770-221	100

Lockout cap; for plug; separable; 5-pole			
	yellow	770-360	100










# WAGO Luminaire Connectors

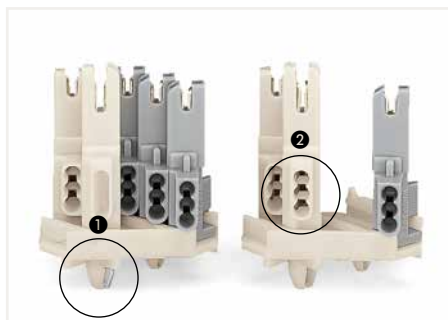
WAGO Luminaire Connectors

			Page
	Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures	267 Series	184
	Connectors for In-Line Mounting of Fluorescent Lighting Fixtures	267 Series	191
	Luminaire Disconnect Connector	873 Series	192

# Pluggable Connection System for Partially Stripped Conductors

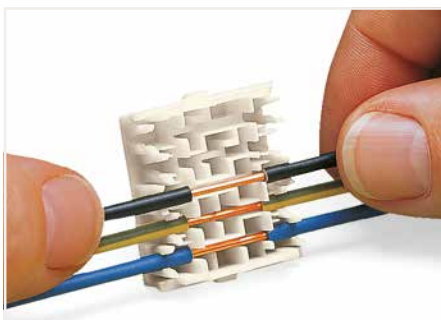
## Description and Installation

### 267 Series

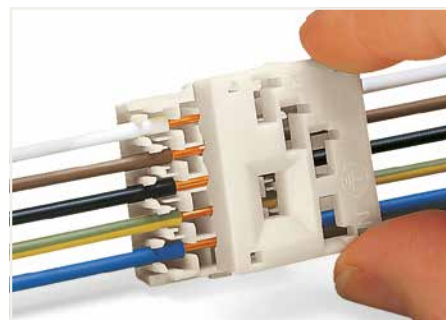


1 Socket with direct ground contact to lighting fixture panel

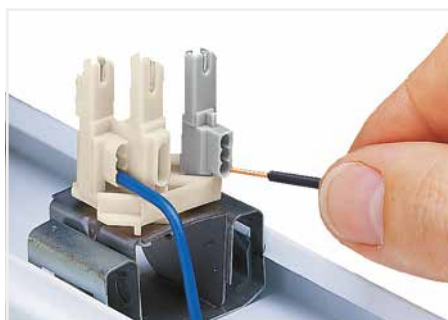
2 Socket with PUSH WIRE® connection for ground conductors



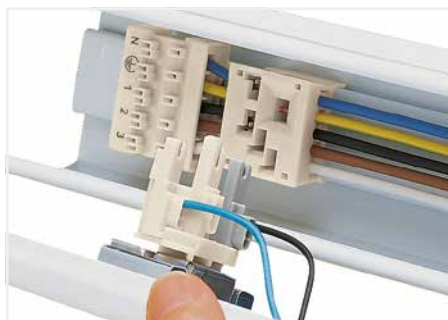
Snapping a partially stripped conductor into the conductor support base. Conductor supports replace standard sockets.



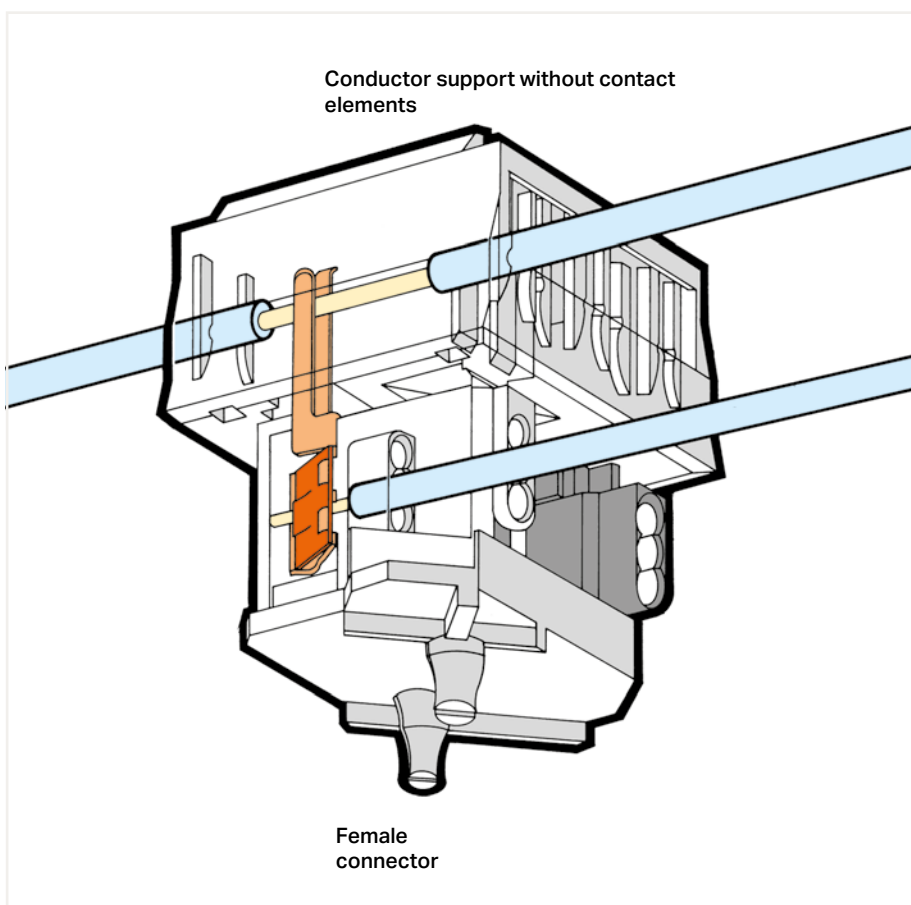
Latching conductor support cover



Inserting a conductor.  
Insert the conductor until it hits backstop!



Inserting the socket into the conductor support.



Field-wiring terminal block with direct ground contact to lighting fixture panel



Terminal block matched to the rail profile;  
shown here with snap-in foot



Fluorescent lighting fixture with pluggable connector and field-wiring terminal block

# Pluggable Connection System with Insulation Displacement Connection (IDC)

**PUSH WIRE®**

## Description and Installation

### 267 Series



Socket with PUSH WIRE® connection for ground conductors



Snap-on type socket, 2- to 4-pole



Securing the base socket to the snap-on type socket (system expansion: 7 + 4 poles).



Insulation Displacement Connection (IDC)



System expansion assembly: socket and conductor support



System expansion assembly: conductor support



Conductor support cover with dovetail mount for snap-on type conductor support



Snap-on type conductor support, 4-pole



Securing the snap-on type conductor support to the cover (system expansion: 7 + 4 poles)

**6**

# Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures

## Conductor Support

### 267 Series



#### 267 Series for Partially Stripped Conductors:

- Non-contacting conductor support
- Compact design

#### 267 Series with Insulation Displacement Connection (IDC):

- Flexible, modular 5- to 11-pole pluggable connection system
- IDC connection for through-wiring applications
- Future system expansions possible

Electrical Data	PUSH WIRE® Connection (connector for in-line mounting of fluo- rescent lighting fixtures and snap-on type conductor support)	PUSH WIRE® Connection (socket)	IDC (conductor support)
Ratings per	IEC/EN 61984	IEC/EN 61984	IEC/EN 61984
Overvoltage category	II	II	II
Pollution degree	2	2	2
Rated voltage	500 V	500 V	500 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	16 A	6 A	6 A
Approvals per	UL 1977	UL 1977	UL 1977
Rated voltage	600 V	600 V	600 V
Nominal current UL	15 A	6 A	6 A
<b>Material Data</b>			
Material group	I		
Insulation material	Polyamide 6.6 (PA66)		
Flammability class per UL94	V0		
Temperature stability	105 °C		
Clamping spring material	Chrome nickel spring steel (CrNi)		
Contact Material	Electrolytic copper (E <sub>cu</sub> )		
Contact plating	Tin-plated		

Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures

Conductor Support for Partially Stripped Conductors

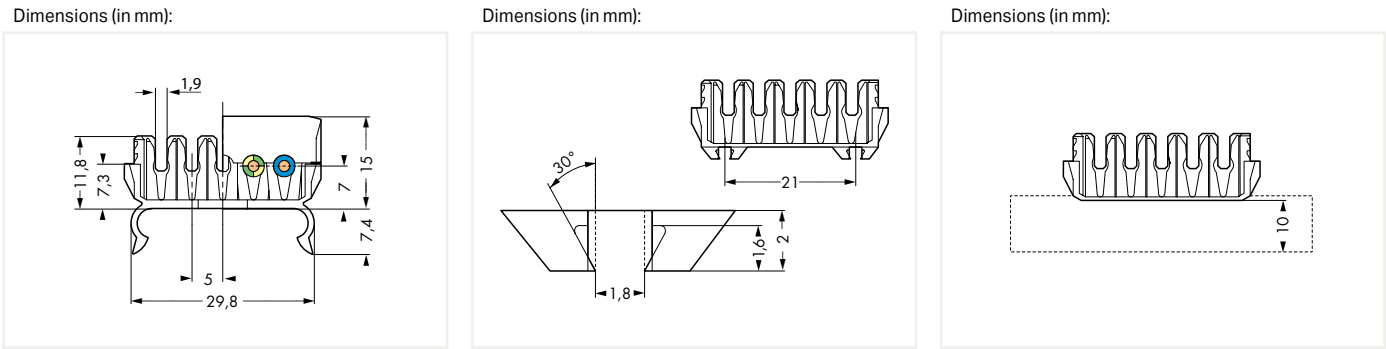
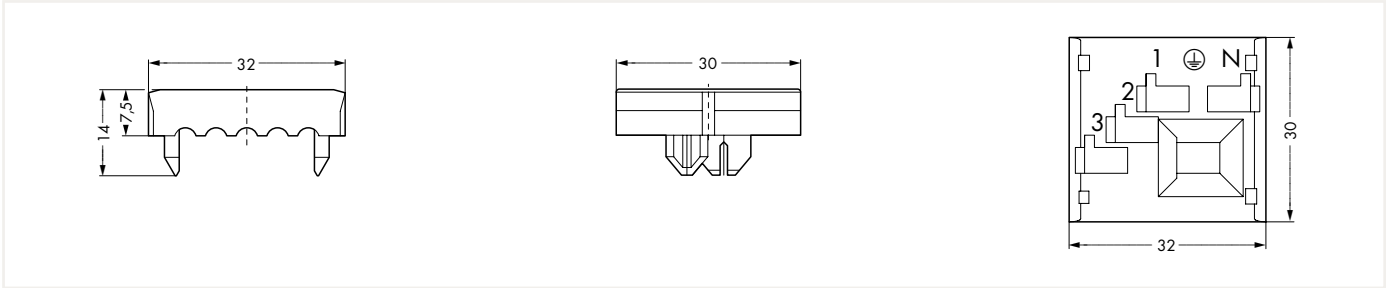
267 Series

Technical Data		Technical Data		Technical Data	
5 x 1.5 ... 2.5 mm <sup>2</sup> "s"	5 x 16 ... 14 AWG "sol."	5 x 1.5 ... 2.5 mm <sup>2</sup> "s"	5 x 16 ... 14 AWG "sol."	5 x 1.5 ... 2.5 mm <sup>2</sup> "s"	5 x 16 ... 14 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A	500 V / 4 kV / 6 A	600 V/6 A	500 V / 4 kV / 6 A	600 V/6 A

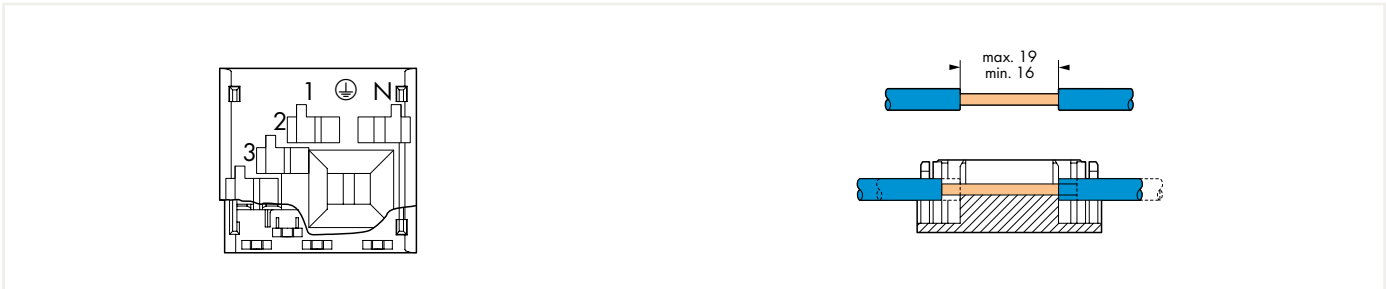


Conductor support with snap-on foot; consisting of base and cover; with molded pole marking on cover (N ⊕ 1 2 3); white			Conductor support with dovetail; consisting of base and cover; with molded pole marking on cover (N ⊕ 1 2 3); white			Conductor support with custom foot; consisting of base and cover; with molded pole marking on cover (N ⊕ 1 2 3); white		
Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit	Pole No.	Item No.	Pack. Unit
Cover			Cover			Cover		
5	267-140	500	5	267-140	500	5	267-140	500
Base			Base			Base		
5	267-141	500	5	267-143	500	5	267-xxx ❶	500

Dimensions (in mm):



Dimensions (in mm):






# Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures


## Socket for Partially Stripped Conductors

### 267 Series

#### Technical Data

0.5 ... 1 mm <sup>2</sup> "s"	22 ... 18 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A
 8 mm / 0.31 inch	

#### Technical Data

0.5 ... 1 mm <sup>2</sup> "s"	22 ... 18 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A
 8 mm / 0.31 inch	



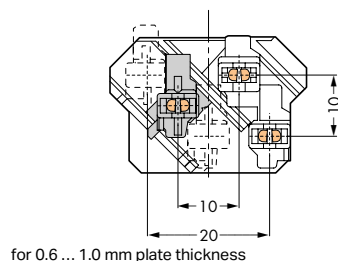
Socket; with snap-in mounting feet and ground conductor connection; white/gray; with molded pole marking; gray socket for phase selection to 1 – 2 – 3 (not possible with 5-pole sockets)

Pole No.	Item No.	Pack. Unit
3	267-113	500
4	267-114	500
5	267-115	500

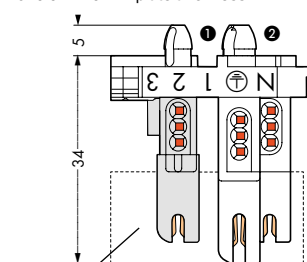
Socket; with snap-in mounting feet and direct ground contact; white/gray; with molded pole marking; gray socket for phase selection to 1 – 2 – 3 (not possible with 5-pole sockets)

Pole No.	Item No.	Pack. Unit
3	267-123	500
4	267-124	500
5	267-125	500

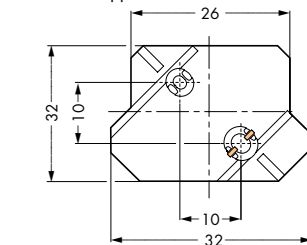
Dimensions (in mm):



for 0.6 ... 1.0 mm plate thickness

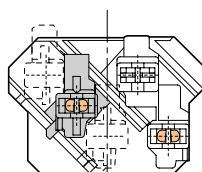


Conductor support

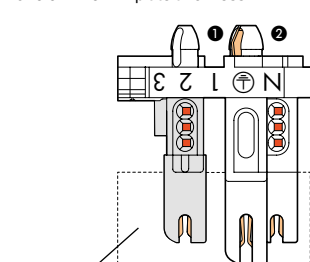


- ① Diameter of drilled hole: 4.2 mm
- ② Diameter of drilled hole: 5.2 mm

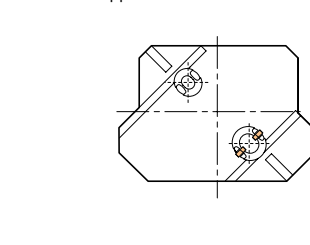
Dimensions (in mm):



for 0.6 ... 1.0 mm plate thickness



Conductor support



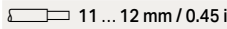
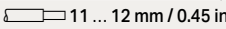
- ① Diameter of drilled hole: 4.2 mm
- ② Diameter of drilled hole: 5.2 mm

Drilled hole for direct ground contact must be free of varnish and oxide films.  
Equipped with varnished metal plates upon request.

Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures

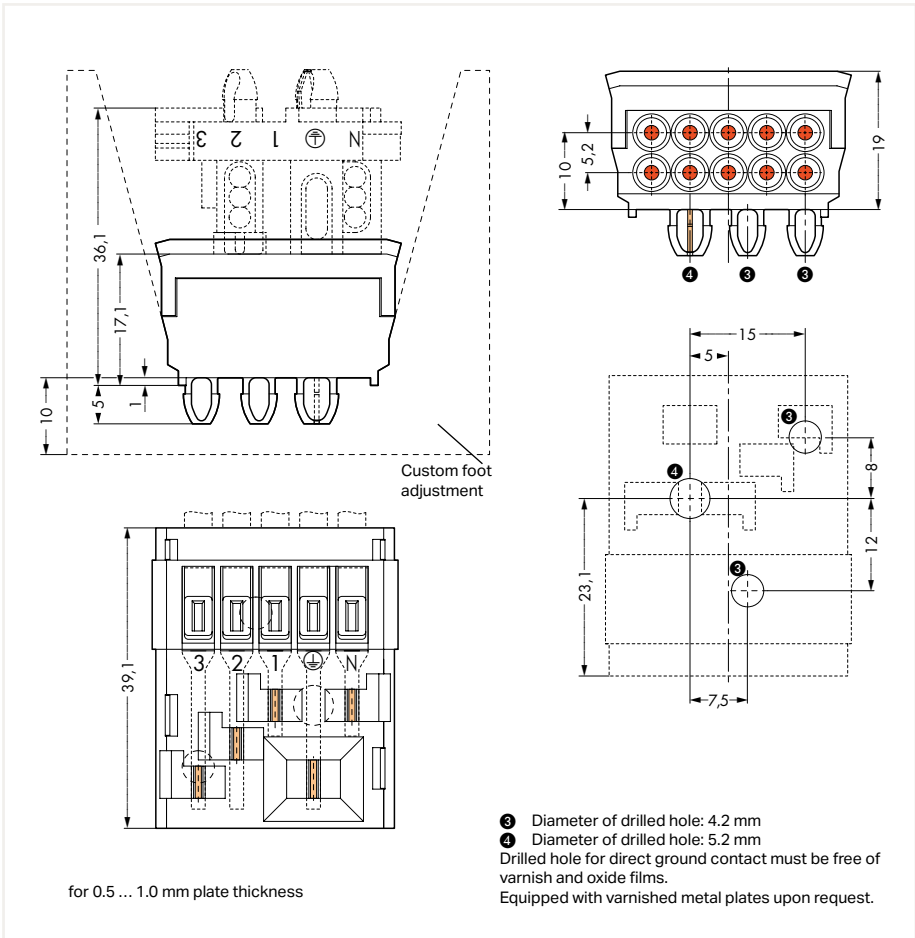
Conductor Support with Field-Wiring Connection

267 Series

Technical Data		Technical Data	
5 x 2/1,5 ... 2.5 mm <sup>2</sup> "s"	5 x 16 ... 14 AWG "sol."	5 x 2/1,5 ... 2.5 mm <sup>2</sup> "s"	5 x 16 ... 14 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A	500 V / 4 kV / 6 A	600 V/6 A
 11 ... 12 mm / 0.45 inch		 11 ... 12 mm / 0.45 inch	



Conductor support; with field-wiring connection and snap-in mounting feet; white				Conductor support; with field-wiring connection and snap-in mounting feet; with direct GND contact; white			
Pole No.	Marking	Item No.	Pack. Unit	Pole No.	Marking	Item No.	Pack. Unit
3	N, PE, 1	267-313	50	3	N, PE, 1	267-303	50
4	N, PE, 1, 2	267-314	50	4	N, PE, 1, 2	267-304	50
5	N, PE, 1, 2, 3	267-315	50	5	N, PE, 1, 2, 3	267-305	50



# Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures

## Conductor Support with Insulation Displacement Connection (IDC)

### 267 Series

#### Technical Data

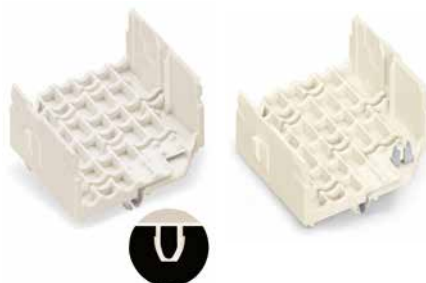
1.5 ... 2.5 mm <sup>2</sup> "s"	16 ... 14 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A

#### Technical Data

1.5 ... 2.5 mm <sup>2</sup> "s"	16 ... 14 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A

#### Technical Data

500 V / 4 kV / 16 A	600 V/15 A
11 ... 12 mm / 0.45 inch	



Conductor support cover; with dovetail guide and IDC contacts; with molded pole marking; white

Pole No.	Marking	Item No.	Pack. Unit
5	N, ⊕, 1, 2, 3	267-435	50
7	N, ⊕, 1, 2, 3, +, -	267-437	50

Conductor support base; with snap-in mounting feet; white

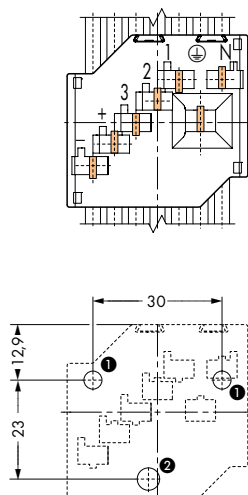
Description	Item No.	Pack. Unit
Without snap-in GND contact	267-412	250
With snap-in GND contact	267-422	250

Snap-on type conductor support; 4-pole

Color	Item No.	Pack. Unit
0.75 ... 1.5 mm <sup>2</sup>		
○ White cover	267-324	500
1.5 ... 2.5 mm <sup>2</sup>		
● Gray cover	267-328	500

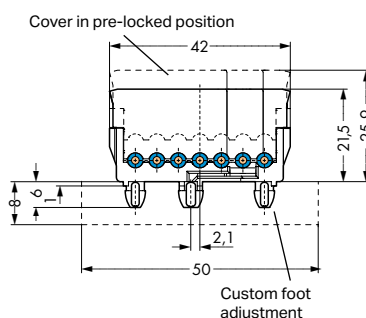
6

Dimensions (in mm):

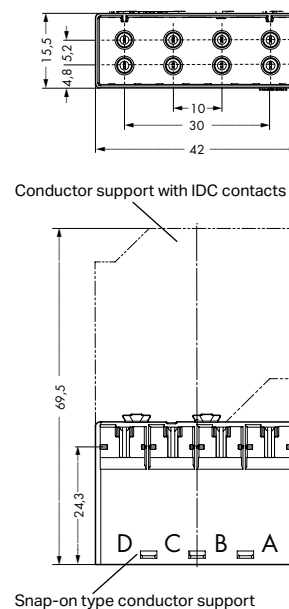


- ① Diameter of drilled hole: 4.2 mm
- ② Diameter of drilled hole: 5.2 mm

Dimensions (in mm):



Dimensions (in mm):



# Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures

## Socket for Conductor Support with Insulation Displacement Connection (IDC)

### 267 Series

#### Technical Data

0.5 ... 1 mm<sup>2</sup> "s" 22 ... 18 AWG "sol."

500 V / 4 kV / 6 A 600 V/6 A

8 mm / 0.31 inch



#### Technical Data

0.5 ... 1 mm<sup>2</sup> "s" 22 ... 18 AWG "sol."

500 V / 4 kV / 6 A 600 V/6 A

8 mm / 0.31 inch



#### Technical Data

0.5 ... 1 mm<sup>2</sup> "s" 22 ... 18 AWG "sol."

500 V / 4 kV / 6 A 600 V/6 A

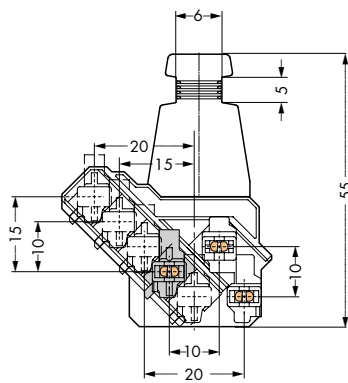
8 mm / 0.31 inch



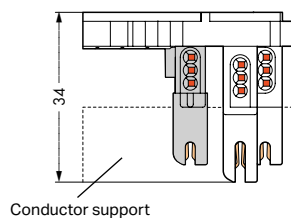
Socket; with ground conductor connection and strain relief plate; white/gray

Pole No.	Item No.	Pack. Unit
3	267-223	500
4	267-224	500
5	267-225	500
6	267-226	500
7	267-227	500

Dimensions (in mm):



for 0.6 ... 1.0 mm plate thickness

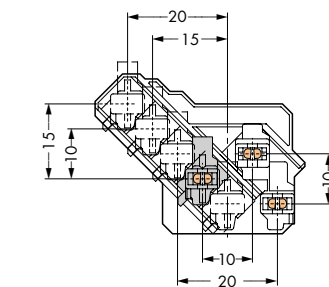


Conductor support

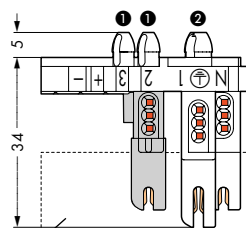
Socket; with snap-in mounting feet and ground conductor connection; white/gray; with molded pole marking; gray socket for phase selection to 1, 2, 3, +, - (not possible with 7-pole socket)

Pole No.	Item No.	Pack. Unit
3	267-163	500
4	267-164	500
5	267-165	500
6	267-166	500
7	267-167	500

Dimensions (in mm):



for 0.6 ... 1.0 mm plate thickness



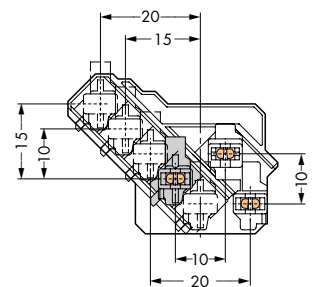
Conductor support

- ① Diameter of drilled hole: 4.2 mm
- ② Diameter of drilled hole: 5.2 mm

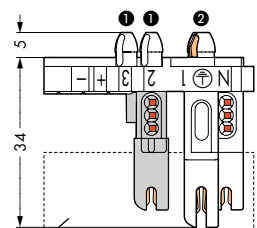
Socket; with snap-in mounting feet and direct ground contact; white/gray; with molded pole marking; gray socket for phase selection to 1, 2, 3, +, - (not possible with 7-pole socket)

Pole No.	Item No.	Pack. Unit
3	267-173	500
4	267-174	500
5	267-175	500
6	267-176	500
7	267-177	500

Dimensions (in mm):



for 0.6 ... 1.0 mm plate thickness



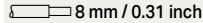
Conductor support

- ① Diameter of drilled hole: 4.2 mm
  - ② Diameter of drilled hole: 5.2 mm
- Drilled hole for direct ground contact must be free of varnish and oxide films.  
Equipped with varnished metal plates upon request.

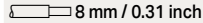
# Pluggable Connection System with Phase Selection for Fluorescent Lighting Fixtures

## Socket/Socket Module for Conductor Support with Insulation Displacement Connection (IDC) 267 Series

### Technical Data

0.5 ... 1 mm <sup>2</sup> "s"	16 ... 14 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A
	

### Technical Data

3 x 0.5 ... 1 mm <sup>2</sup> "s"	16 ... 14 AWG "sol."
500 V / 4 kV / 6 A	600 V/6 A
	



### Snap-on type socket

Pole No.	Item No.	Pack. Unit
2	267-232	500
3	267-233	500
4	267-234	500

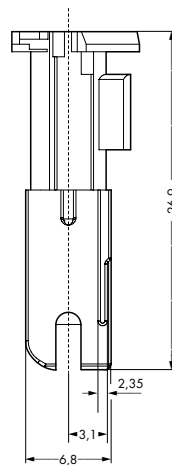
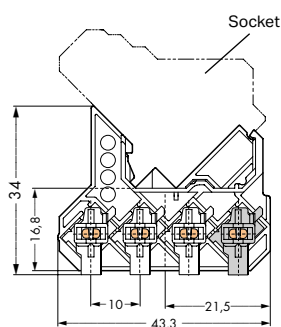
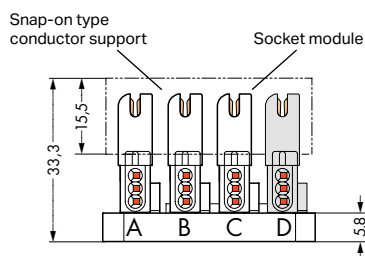
### Socket module; 1-pole

Color	Item No.	Pack. Unit
● black	267-109	500
● gray	267-101	500
● red	267-120	500
● yellow	267-110	500
● violet	267-119	500

Dimensions (in mm):

Dimensions (in mm):


6




## Connectors for In-Line Mounting of Fluorescent Lighting Fixtures

### 267 Series


#### Technical Data

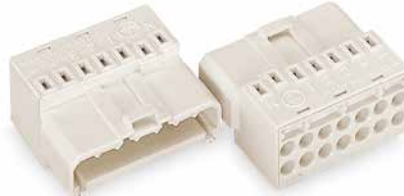
1.5 ... 2.5 mm <sup>2</sup> "s"	16 ... 14 AWG "sol."
500 V / 4 kV / 16 A	600 V/15 A
 11 ... 12 mm / 0.45 inch	

#### Technical Data

1.5 ... 2.5 mm <sup>2</sup> "s"	16 ... 14 AWG "sol."
500 V / 4 kV / 16 A	600 V/15 A
 11 ... 12 mm / 0.45 inch	

#### Technical Data

1.5 ... 2.5 mm <sup>2</sup> "s"	16 ... 14 AWG "sol."
0.75 ... 1.5 mm <sup>2</sup> "s"	18 ... 16 AWG "sol."
500 V / 4 kV / 16 A	600 V/15 A
 11 ... 12 mm / 0.45 inch	



#### Socket; without ground contact tab; white

Pole No.	Marking	Item No.	Pack. Unit
7	N, ⊕, 1, 2, 3, +, -	267-501	50
5	N, ⊕, 1, 2, 3	267-502	50

#### Plug; with connection for ground contact tab; white

Pole No.	Marking	Item No.	Pack. Unit
7	N, ⊕, 1, 2, 3, +, -	267-510	50
5	N, ⊕, 1, 2, 3	267-519	50

#### Plug; with connection for ground contact tab; white

Pole No.	Marking	Item No.	Pack. Unit
7	N, ⊕, 1, 2, 3, +, -	267-521	50

#### Socket; without ground contact tab; gray

Pole No.	Marking	Item No.	Pack. Unit
4	A, B, C, D	267-506	50

#### Plug; with connection for ground contact tab; enhanced locking strength; white

Pole No.	Marking	Item No.	Pack. Unit
7	N, ⊕, 1, 2, 3, +, -	267-516	50

#### Socket; without ground contact tab; yellow

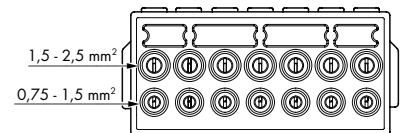
Pole No.	Marking	Item No.	Pack. Unit
4	A, B, C, D	267-507	50

#### Plug; with connection for ground contact tab; gray

Pole No.	Marking	Item No.	Pack. Unit
4	A, B, C, D	267-518	50

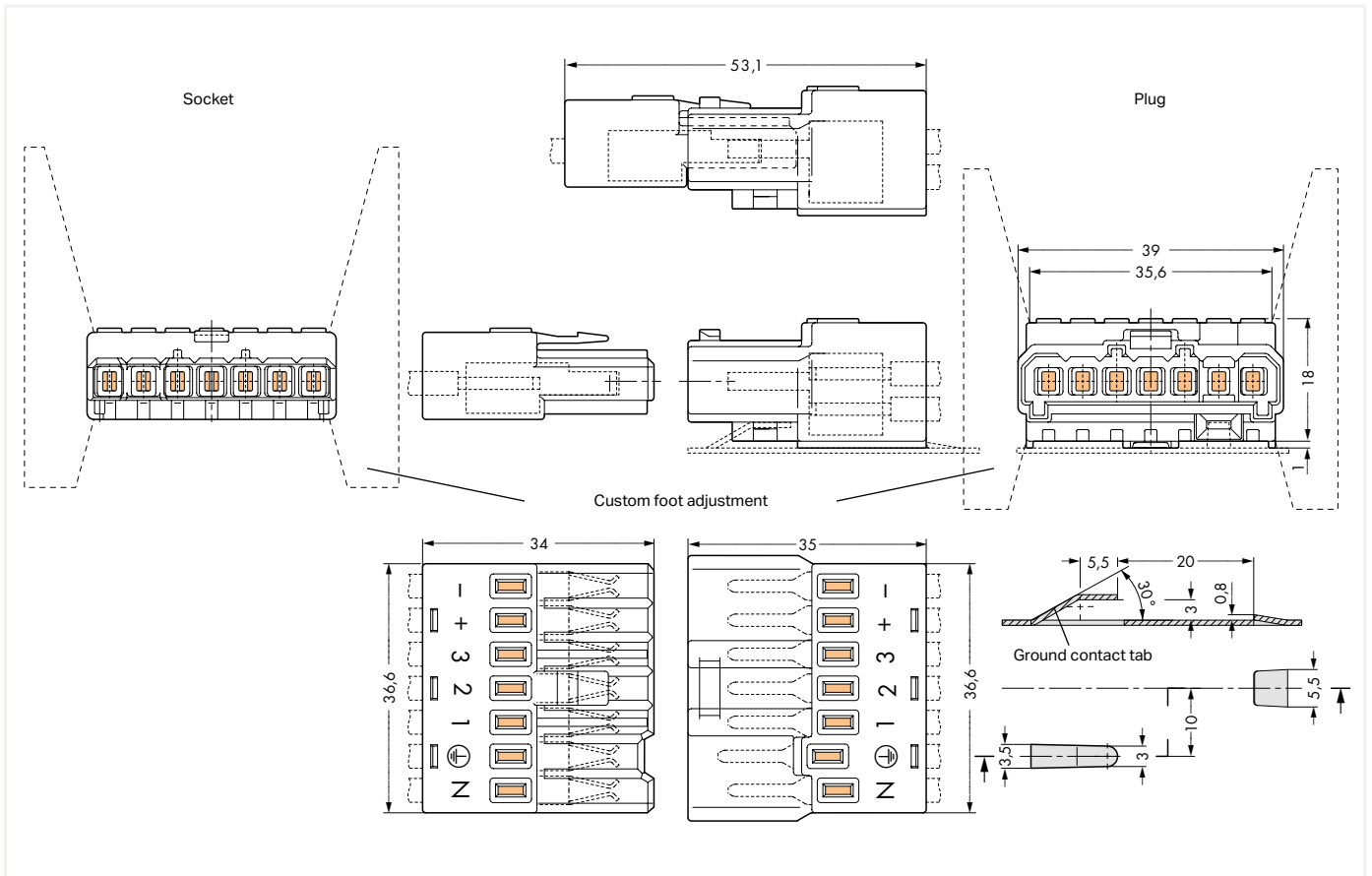
#### Plug; with connection for ground contact tab; yellow

Pole No.	Marking	Item No.	Pack. Unit
4	A, B, C, D	267-520	50



6

Dimensions (in mm):





## Luminaire Disconnect Connector 873 Series

### Technical Data

3-conductor plug ❶	1-conductor socket ❷
18 ... 12 AWG "s"	18 AWG "s"
16 ... 12 AWG "st"	600 V, 6 A
11 ... 13 mm / 0.47 inch ❶	
9 ... 11 mm / 0.39 inch ❷	

### Technical Data

3-conductor plug ❶	1-conductor socket ❷
18 ... 12 AWG "s"	18 AWG "s"
16 ... 12 AWG "st"	600 V, 6 A
11 ... 13 mm / 0.47 inch ❶	
9 ... 11 mm / 0.39 inch ❷	

Touchproof connectors are required for ballast supply cables in the USA and Canada. When exchanging a ballast:

1. The touch-proof plug-in connection is disconnected first
2. The ballast is replaced
- » 3. Network connection is restored by plugging the connection. This streamlines ballast replacement while enhancing safety by safeguarding the installer from electric shock. The 873 Series connectors are approved according to UL 2459 and CSA 22.2 for this type of application.

873 Series approvals per EN 60998 and EN 61984:

EN 60998:  
0.75 mm<sup>2</sup> (solid), 6 A for socket  
1.5 ... 4 mm<sup>2</sup> (solid), 32 A for plug  
» 400 V/4 kV/2  
EN 61984:  
0.75 mm<sup>2</sup> (solid), 6 A for socket  
0.75 ... 4 mm<sup>2</sup> (solid), 32 A for plug  
400 V/4 kV/2

» ❶ 2-conductor plug

» ❷ 1-conductor socket

### Luminaire Disconnect Connector

Pole No.	Item No.	Pack. Unit
2	873-902	40

### Luminaire Disconnect Connector

Pole No.	Item No.	Pack. Unit
3	873-903	20

6

Luminaire Disconnect  
Sectionneur du luminaire

PUSH




<p>✓  18-12 AWG CU, SOL, UL/CSA 0,75 - 4 mm<sup>2</sup></p> <p>✓  16-12 AWG (≤ 19 str.) CU, UL 14-12 AWG (≤ 19 str.) CU, CSA 1,5 - 4 mm<sup>2</sup> One-time use only - Do not reuse N'utiliser qu'une seule fois</p> <p></p> <p> 0.45 inch / 11 - 13 mm</p>	<p>✓  18 AWG CU, SOL, UL/CSA 0,75 mm<sup>2</sup></p> <p></p> <p> 0.35 inch / 9 - 11 mm</p>
--	--

**Correct method of solid wire removal**  
Hold wire to be removed in one hand, the connector in the other - twist slightly while pulling the connector.

**Déconnexion correcte du conducteur rigide**  
Tenir d'une main le conducteur à déconnecter et de l'autre main le connecteur - Opérer une légère torsion du conducteur tout en tirant sur le connecteur.

Luminaire Disconnect Connector

873 Series

Technical Data	
3-conductor plug ❶	1-conductor socket ❷
18 ... 12 AWG "s"	18 AWG "s"
16 ... 12 AWG "st"	600 V, 6 A 
 11 ... 13 mm / 0.47 inch ❶	
 9 ... 11 mm / 0.39 inch ❷	



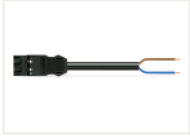



Luminaire disconnect connector; preceding ground contact; center position		
Pole No.	Item No.	Pack. Unit
3	873-953	500



# WAGO Pluggable Connection System *WINSTA*®

WAGO Pluggable Connection System WINSTA®

			Page
	WINSTA® MINI	890 Series	200
	WINSTA® MIDI	770 Series	216
	WINSTA® MIDI	771 Series	230
	Linect® Box		231

# THE BUILDINGS OF TOMORROW ARE BUILT USING THE *WINSTA*® SYSTEM OF TODAY

Perfectly Plugged Electrical Building Installations



# SUCCESS THROUGH EXPERTISE

## Project Planning with WAGO

WAGO offers consulting and project planning services to help devise the best possible solution for your project. Our experienced team of professionals will gladly help you implement your project with our products.

## Installation Examples:



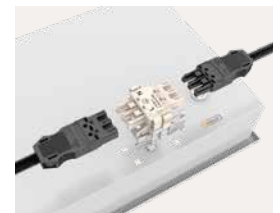
In suspended ceilings



WINSTA® MINI/MINI special  
0.25 ... 1.5 mm<sup>2</sup> / 16 A / 400 V



WINSTA® MIDI/MIDI special  
0.5 ... 4 mm<sup>2</sup> / 25 A / 400 V



WINSTA® MIDI Linect®  
0.5 ... 4 mm<sup>2</sup> / 25 A / 400 V



Power distribution



WINSTA® MAXI  
0.5 ... 6 mm<sup>2</sup> / 35 A / 400 V



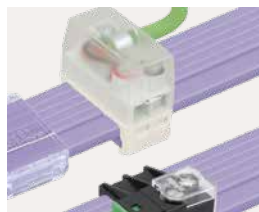
WINSTA® RD  
1.5 and 2.5 mm<sup>2</sup> / 20 A / 250 V



WINSTA® KNX  
Max. Ø 0.8 mm / 3 A / 50 V



In raised floors



WINSTA® IDC  
0.5 ... 1.5 mm<sup>2</sup> / 3 A / 50 V



WINSTA® IDC  
2.5 ... 16 mm<sup>2</sup> / 76 A / 400 V



## WAGO Pluggable Connection System WINSTA®

### WINSTA® MINI

#### For Space-Restricted Applications

- Sensors (switches, push-buttons, window contacts, pressure switches, temperature sensors, etc.)
- Actuators (control valves, magnetic valves, servo motors, blinds/sun protection, etc.)
- Protection class II for halogen lamps and luminaires
- Control signals
- 1.5 mm<sup>2</sup> (16 AWG), 250 V, 16 A

2 ... 5 poles  
890 and 891 Series

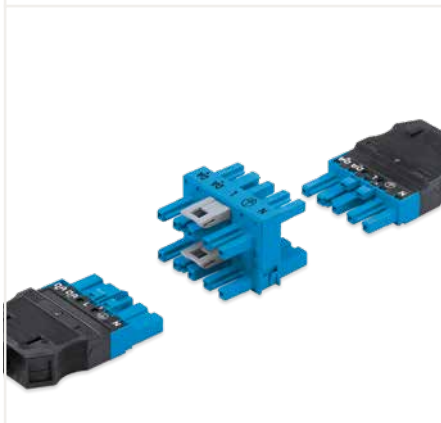


### WINSTA® MIDI

#### For Maximum Possibilities

- General building installation, ideal for modern buildings
- Standard lighting fixtures and safety lights
- Tradeshow and shop installation
- Motor homes
- Lab work stations
- Rolling stock
- Marine applications
- 4 mm<sup>2</sup> (12 AWG), 250/400 V, 25 A

2 ... 5 poles  
770 and 771 Series



### WINSTA® MAXI

#### For High-Current Applications

- Power supply via 6 mm<sup>2</sup> (10 AWG) cable for extended cable runs
- 32 A power supply in distribution boxes for high energy requirements
- 6 mm<sup>2</sup> (10 AWG), 250/400 V, 35 A

5 poles  
831 Series



### WINSTA® MINI special

#### For Specialty Applications

2 ... 5 poles  
890 and 891 Series



### WINSTA® MIDI special

#### For Specialty Applications

2 ... 5 poles  
770 and 771 Series



### WINSTA® Boxes

#### Distribution Boxes

899 Series



**WINSTA® KNX****For the Standardized Bus**

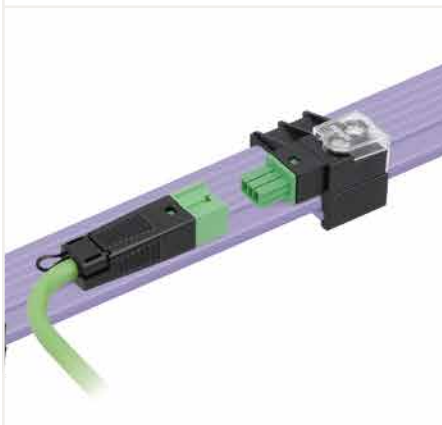
- KNX/EIB
- Control signals
- Ø 0.8 mm, 50 V, 3 A

2 poles  
893 and 894 Series

**WINSTA® IDC****For Maximum Flexibility**

- Supply and tap off is possible at any time and at any location along the flat cable. No cutting, no stripping, no dismantling – very user-friendly
- A 120° rotation is all that is required to connect the flat cable
- Space-efficient across the flat cable through longitudinal tap off
- 2.5/4 mm<sup>2</sup> (14/12 AWG), 400 V, 25 A
- 10 mm<sup>2</sup> (8 AWG), 690 V, 57 A
- 16 mm<sup>2</sup> (6 AWG), 690 V, 76 A

2, 3, 5 and 7 poles  
772, 893, 895, 896 and 897 Series

**WINSTA® RD****For Round Conduits and Ducts**

- Outside diameter of 17.5 mm for applications in electrical conduits with an inner diameter > 18 mm
- Prefabricated houses
- Recessed luminaires
- Wall and ceiling cutouts

3 and 4 poles  
774 Series



## Socket and Plug; without Strain Relief Housing

### 2-Pole

### WINSTA® MINI; 890 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data			
Coding	A, I		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	–	–
Rated surge voltage	4 kV	–	–
Rated current	16 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	14 A		

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm² / 22 ... 20 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 22 ... 20 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16 \text{ A}$ , 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 3.8 ... 8.2 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

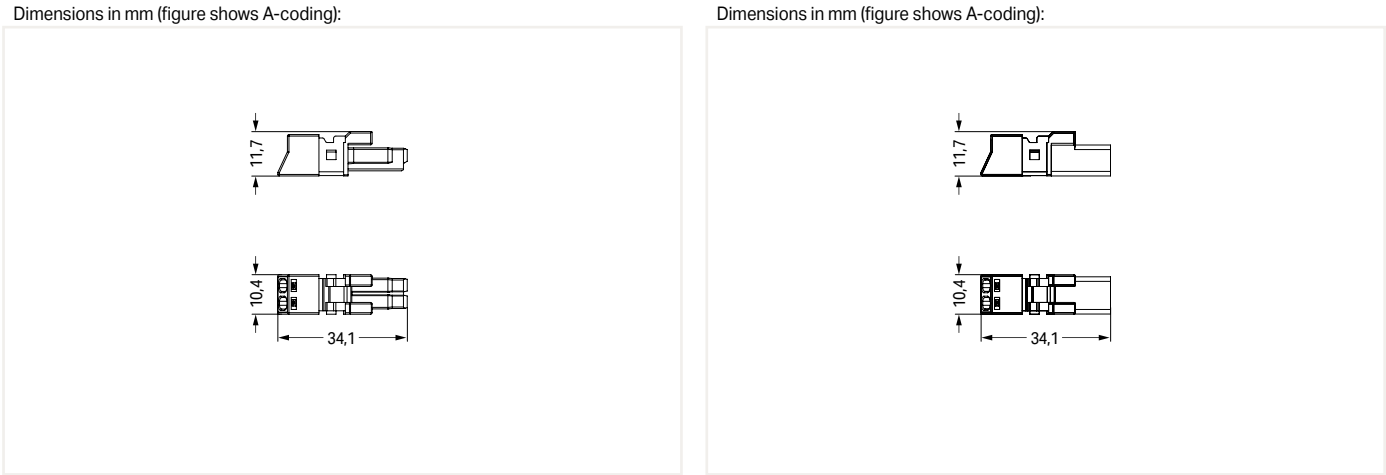
2-Pole

WINSTA® MINI; 890 Series


PUSH-IN CAGE CLAMP®




Color	Coding	Marking	Item No.	Pack. Unit	Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L N	890-202	50	● black	A	L N	890-212	50
○ white	A	L N	890-222	50	○ white	A	L N	890-232	50
● blue	I	+ -	890-1102	50	● blue	I	+ -	890-1112	50




Accessories; for all products on this page




Strain relief housing; 3.8 ... 8.2 mm cable diameter; 32 mm strip length		
Color	Item No.	Pack. Unit
black	890-502	50
white	890-512	50




Locking lever; for flying leads; manually operated		
Color	Item No.	PU   SPU
black	890-101	100   50
white	890-121	100   50



Locking lever; for flying leads; tool operated		
Color	Item No.	PU   SPU
black	890-111	100   50
white	890-131	100   50



Mounting carrier; for 2- to 5-pole flying leads		
Color	Item No.	Pack. Unit
black	890-310	100
white	890-311	100

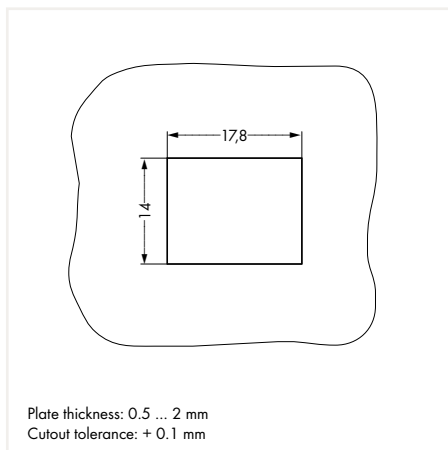


Operating tool with a partially insulated shaft; type 1; (2.5 x 0.4) mm blade		
Color	Item No.	Pack. Unit
green	210-719	1

## Snap-In Socket and Plug

### 2-Pole

### WINSTA® MINI; 890 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

#### Electrical Data

Coding	A, I		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	–	–
Rated surge voltage	4 kV	–	–
Rated current	16 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	14 A		

Clearances and creepage distances	≥ 5.5 mm (with strain relief ≥ 6.5 mm to exposed surfaces – protection class II)
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

#### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm²

#### Mechanical Data

Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16$ A, 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 3.8 ... 8.2 mm
Protection type	IP2xC (with strain relief housing)

#### Material Data

Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

#### Environmental Requirements

Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Snap-In Socket and Plug

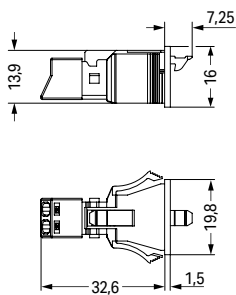
2-Pole

WINSTA® MINI; 890 Series

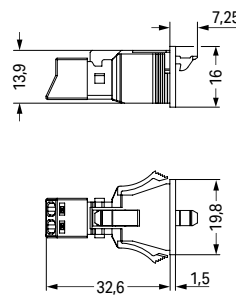
PUSH-IN CAGE CLAMP®



Dimensions in mm (figure shows A-coding):



Dimensions in mm (figure shows A-coding):



Socket				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L N	890-702	50
○ white	A	L N	890-722	50
● blue	I	+ -	890-2102	50

Plug				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L N	890-712	50
○ white	A	L N	890-732	50
● blue	I	+ -	890-2112	50

Accessories; for all products on this page



Lockout cap; for cutout; 2-pole		
Color	Item No.	Pack. Unit
● black	890-642	100
○ white	890-692	100



Operating tool; partially insulated; 2-way		
Color	Item No.	Pack. Unit
● green	770-382	1



## Socket and Plug; without Strain Relief Housing

### 3-Pole

### WINSTA® MINI; 890 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data			
Coding	A		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	–	–
Rated surge voltage	4 kV	–	–
Rated current	16 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	14 A		

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm² / 22 ... 20 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 22 ... 20 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16 \text{ A}$ , 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 4.5 ... 10 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

3-Pole

WINSTA® MINI; 890 Series

PUSH-IN CAGE CLAMP®

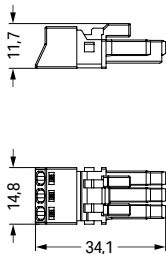
Socket

Plug



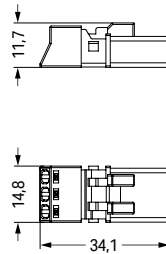
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	890-203	50
○ white	A	L ⊕ N	890-223	50

Dimensions in mm (figure shows A-coding):



Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	890-213	50
○ white	A	L ⊕ N	890-233	50

Dimensions in mm (figure shows A-coding):



Accessories; for all products on this page



Strain relief housing; 4.5 ... 10 mm cable diameter; 40 mm strip length		
Color	Item No.	Pack. Unit
black	890-503	50
white	890-513	50

Locking lever; for flying leads; manually operated		
Color	Item No.	PU   SPU
black	890-101	100   50
white	890-121	100   50

Locking lever; for flying leads; tool operated		
Color	Item No.	PU   SPU
black	890-111	100   50
white	890-131	100   50



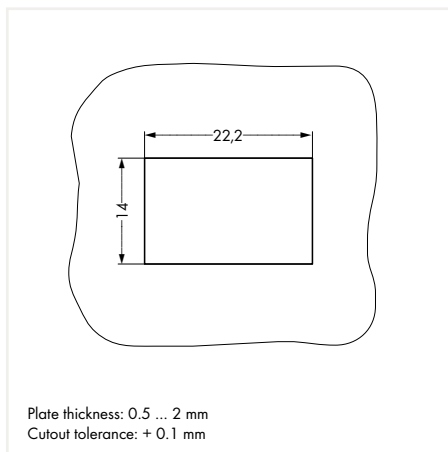
Mounting carrier; for 2- to 5-pole flying leads		
Color	Item No.	Pack. Unit
black	890-310	100
white	890-311	100

Operating tool with a partially insulated shaft; type 1; (2.5 x 0.4) mm blade		
Color	Item No.	Pack. Unit
green	210-719	1

## Snap-In Socket and Plug

### 3-Pole

### WINSTA® MINI; 890 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

#### Electrical Data

Coding	A		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	–	–
Rated surge voltage	4 kV	–	–
Rated current	16 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	14 A		

Clearances and creepage distances	≥ 5.5 mm (with strain relief ≥ 6.5 mm to exposed surfaces – protection class II)
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

#### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm²

#### Mechanical Data

Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16 A, 1.5 mm^2$ )
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 4.5 ... 10 mm
Protection type	IP2xC (with strain relief housing)

#### Material Data

Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

#### Environmental Requirements

Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Snap-In Socket and Plug

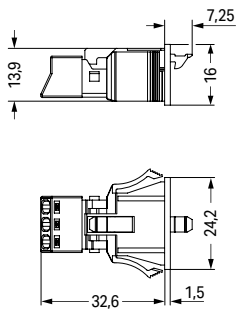
3-Pole

WINSTA® MINI; 890 Series

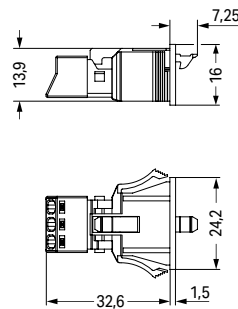
PUSH-IN CAGE CLAMP®



Dimensions in mm (figure shows A-coding):



Dimensions in mm (figure shows A-coding):



Socket				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	890-703	50
○ white	A	L ⊕ N	890-723	50

Plug				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	890-713	50
○ white	A	L ⊕ N	890-733	50

Accessories; for all products on this page



Lockout cap; for cutout; 3-pole		
Color	Item No.	Pack. Unit
● black	770-643	100
○ white	770-693	100



Operating tool; partially insulated; 3-way		
Color	Item No.	Pack. Unit
● green	770-383	1

## Socket and Plug; without Strain Relief Housing

### 4-Pole

### WINSTA® MINI; 890 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data			
Coding	A		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	400 V	–	–
Rated surge voltage	6 kV	–	–
Rated current	16 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	12 A		

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm² / 22 ... 20 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 22 ... 20 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16 \text{ A}$ , 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 6.5 ... 10.5 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

4-Pole

WINSTA® MINI; 890 Series

PUSH-IN CAGE CLAMP®

Socket

Plug



Color	Coding	Marking	Item No.	Pack. Unit	Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 2L 1L	890-204	50	● black	A	N ⊕ 2L 1L	890-214	50
○ white	A	N ⊕ 2L 1L	890-224	50	○ white	A	N ⊕ 2L 1L	890-234	50

Dimensions in mm (figure shows A-coding):

Dimensions in mm (figure shows A-coding):

Accessories; for all products on this page

Strain relief housing; 6.5 ... 10.5 mm cable diameter; 45 mm strip length		
Color	Item No.	Pack. Unit
black	890-504	50
white	890-514	50

Locking lever; for flying leads; manually operated		
Color	Item No.	PU   SPU
black	890-101	100   50
white	890-121	100   50

Locking lever; for flying leads; tool operated		
Color	Item No.	PU   SPU
black	890-111	100   50
white	890-131	100   50

Mounting carrier; for 2- to 5-pole flying leads		
Color	Item No.	Pack. Unit
black	890-310	100
white	890-311	100

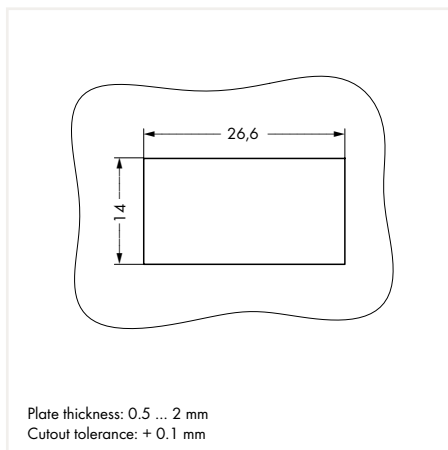
Operating tool with a partially insulated shaft; type 1; (2.5 x 0.4) mm blade		
Color	Item No.	Pack. Unit
green	210-719	1



## Snap-In Socket and Plug

### 4-Pole

### WINSTA® MINI; 890 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

#### Electrical Data

Coding	A		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	400 V	–	–
Rated surge voltage	6 kV	–	–
Rated current	16 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	14 A		

Clearances and creepage distances	≥ 5.5 mm (with strain relief ≥ 6.5 mm to exposed surfaces – protection class II)
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

#### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm²

#### Mechanical Data

Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16$ A, 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 6.5 ... 10.5 mm
Protection type	IP2xC (with strain relief housing)

#### Material Data

Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

#### Environmental Requirements

Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Snap-In Socket and Plug

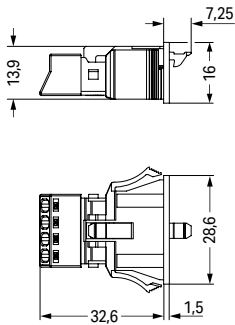
4-Pole

WINSTA® MINI; 890 Series

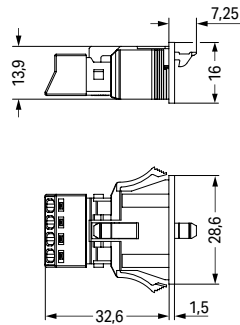
PUSH-IN CAGE CLAMP®



Dimensions in mm (figure shows A-coding):



Dimensions in mm (figure shows A-coding):



Socket				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 2L 1L	890-704	50
○ white	A	N ⊕ 2L 1L	890-724	50

Plug				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 2L 1L	890-714	50
○ white	A	N ⊕ 2L 1L	890-734	50

7

Accessories; for all products on this page



Lockout cap; for cutout; 4-pole		
Color	Item No.	Pack. Unit
● black	770-644	100
○ white	770-694	100



Similar to picture		
Operating tool; partially insulated; 4-way		
Color	Item No.	Pack. Unit
● green	770-384	1

## Socket and Plug; without Strain Relief Housing

### 5-Pole

### WINSTA® MINI; 890 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data			
Coding	A, I		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	400 V	–	–
Rated surge voltage	6 kV	–	–
Rated current	13 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	12 A		

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm² / 22 ... 20 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 22 ... 20 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16$ A, 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 6.5 ... 10.5 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

5-Pole

WINSTA® MINI; 890 Series

PUSH-IN CAGE CLAMP®

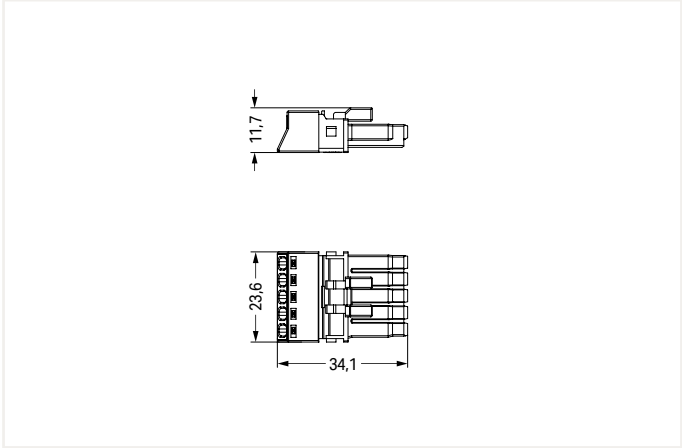
Socket

Plug



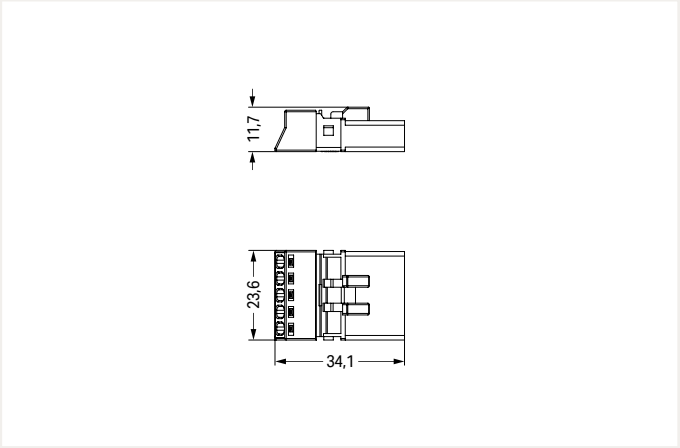
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 1 2 3	890-205	50
○ white	A	N ⊕ 1 2 3	890-225	50
● blue	I	N ⊕ L + -	890-1105	50

Dimensions in mm (figure shows A-coding):



Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 1 2 3	890-215	50
○ white	A	N ⊕ 1 2 3	890-235	50
● blue	I	N ⊕ L + -	890-1115	50

Dimensions in mm (figure shows A-coding):



Accessories; for all products on this page



Strain relief housing; 6.5 ... 10.5 mm cable diameter; 45 mm strip length		
Color	Item No.	Pack. Unit
black	890-505	50
white	890-515	50

Locking lever; for flying leads; manually operated		
Color	Item No.	PU   SPU
black	890-101	100   50
white	890-121	100   50

Locking lever; for flying leads; tool operated		
Color	Item No.	PU   SPU
black	890-111	100   50
white	890-131	100   50

Mounting carrier; for 2- to 5-pole flying leads		
Color	Item No.	Pack. Unit
black	890-310	100
white	890-311	100

Operating tool; for WINSTA® MINI connectors; No. of poles: 5		
Color	Item No.	Pack. Unit
green	890-385	1

## Snap-In Socket and Plug

### 5-Pole

### WINSTA® MINI; 890 Series

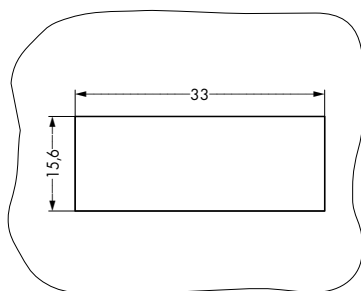


Plate thickness: 0.5 ... 2 mm  
Cutout tolerance: + 0.1 mm

- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

#### Electrical Data

Coding	A, I		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	400 V	–	–
Rated surge voltage	6 kV	–	–
Rated current	13 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	14 A		

Clearances and creepage distances	≥ 5.5 mm (with strain relief ≥ 6.5 mm to exposed surfaces – protection class II)
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

#### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm²

#### Mechanical Data

Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16$ A, 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 6.5 ... 10.5 mm
Protection type	IP2xC (with strain relief housing)

#### Material Data

Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

#### Environmental Requirements

Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Snap-In Socket and Plug

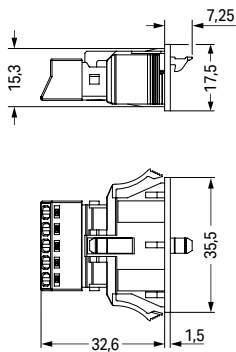
5-Pole

WINSTA® MINI; 890 Series

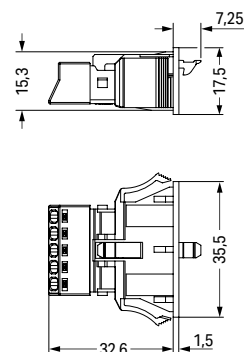
PUSH-IN CAGE CLAMP®



Dimensions in mm (figure shows A-coding):



Dimensions in mm (figure shows A-coding):



Socket				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 1 2 3	890-705	50
○ white	A	N ⊕ 1 2 3	890-725	50
● blue	I	N ⊕ L + -	890-2105	50

Plug				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 1 2 3	890-715	50
○ white	A	N ⊕ 1 2 3	890-735	50
● blue	I	N ⊕ L + -	890-2115	50

Accessories; for all products on this page



Lockout cap; for cutout; 2-pole		
Color	Item No.	Pack. Unit
● black	770-645	100
○ white	770-695	100



Operating tool; partially insulated; 2-way		
Color	Item No.	Pack. Unit
● green	770-382	1



## Socket and Plug; without Strain Relief Housing

### 2-Pole

### WINSTA® MIDI; 770 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data			
Coding	A, I, L		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	–	–
Rated surge voltage	4 kV	–	–
Rated current	25 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	23 A		

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Solid conductor; push-in termination	1.5 ... 4 mm² / 16 ... 12 AWG
Stranded conductor	0.5 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 20 ... 16 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 25\text{ A}$ , 4 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 7 ... 10.5 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

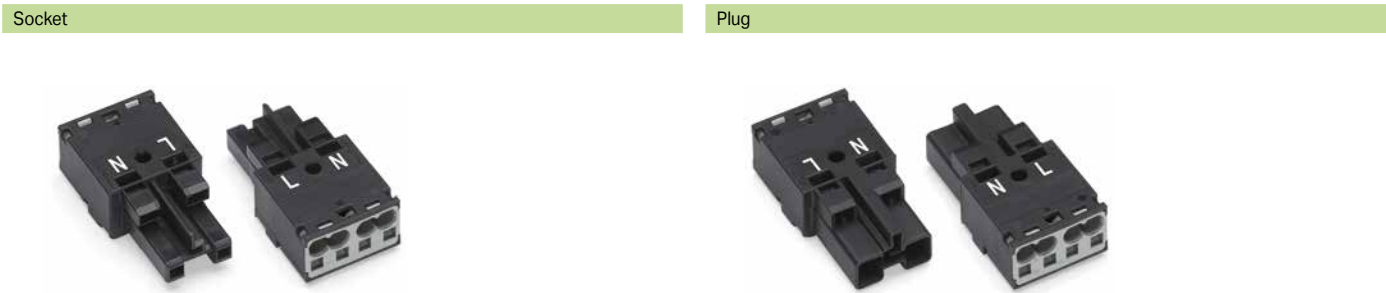
- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

2-Pole

WINSTA® MIDI; 770 Series


PUSH-IN CAGE CLAMP®



Color	Coding	Marking	Item No.	Pack. Unit	Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L N	770-202	100	● black	A	L N	770-212	100
○ white	A	L N	770-222	100	○ white	A	L N	770-232	100
● blue	I	DA+ DA-	770-1102	100	● blue	I	DA+ DA-	770-1112	100
● dark gray	L	L' N'	770-1162	100	● dark gray	L	L' N'	770-1172	100




Accessories; for all products on this page




Strain relief housing; 7 ... 10.5 mm cable diameter;  
35 mm strip length

Color	Item No.	Pack. Unit
black	770-502/041-000	50
white	770-512/041-000	50




Locking lever; for flying leads; manually operated

Color	Item No.	PU   SPU
black	770-101	100   25
white	770-121	100   25




Locking lever; for flying leads; tool operated

Color	Item No.	PU   SPU
black	770-111	100   25
white	770-131	100   25



Lockout cap; for socket; separable; 12-pole

Color	Item No.	Pack. Unit
black	770-201	100
white	770-221	100



Lockout cap; for plug; separable; 5-pole

Color	Item No.	Pack. Unit
yellow	770-360	100

## Socket and Plug; without Strain Relief Housing

### 3-Pole

### WINSTA® MIDI; 770 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data			
Coding	A, P, R, S		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	–	–
Rated surge voltage	6 kV	–	–
Rated current	25 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	23 A		

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Solid conductor; push-in termination	1.5 ... 4 mm² / 16 ... 12 AWG
Stranded conductor	0.5 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 20 ... 16 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 25\text{ A}$ , 4 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 8 ... 11.5 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

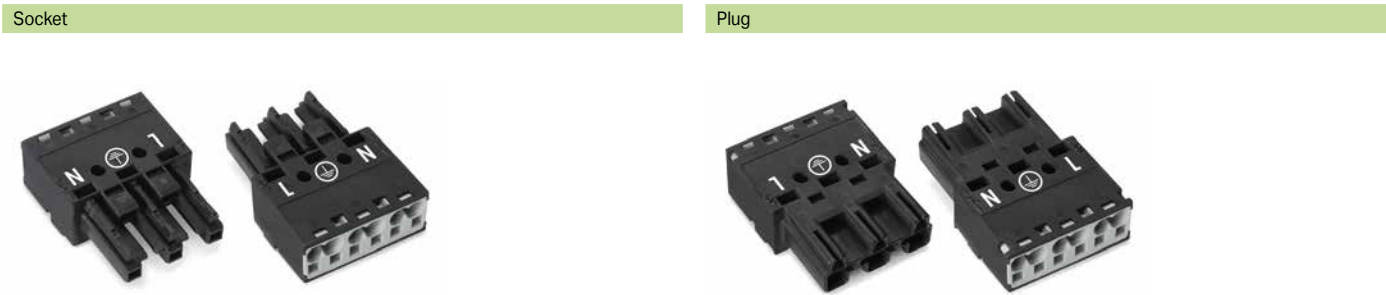
- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

3-Pole

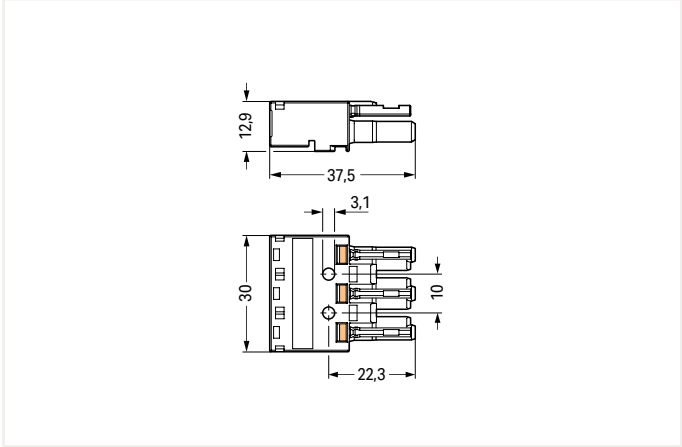
WINSTA® MIDI; 770 Series

PUSH-IN CAGE CLAMP®



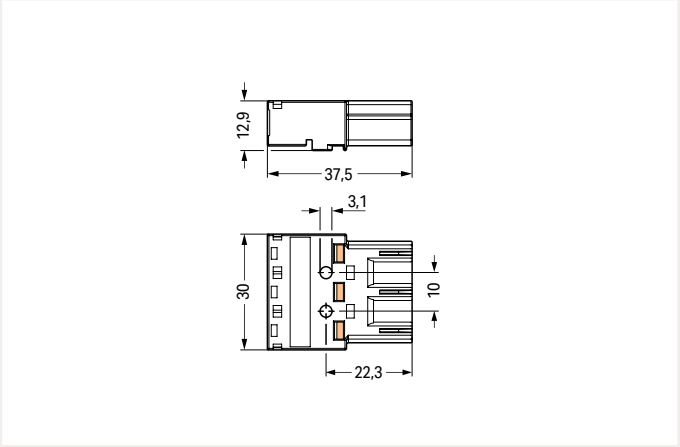
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	770-203	100
○ white	A	L ⊕ N	770-223	100
● red	P	L ⊕ N	770-1303	100
● orange	R	LON LON S	770-1343	100
● brown	S	1 2 S	770-1363	100

Dimensions in mm (figure shows A-coding):




Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	770-213	50
○ white	A	L ⊕ N	770-233	50
● red	P	L ⊕ N	770-1313	100
● orange	R	LON LON S	770-1353	100
● brown	S	1 2 S	770-1373	100


Dimensions in mm (figure shows A-coding):




Accessories; for all products on this page




Strain relief housing; for two cables; 8 ... 11.5 mm cable diameter; 55 mm strip length		
Color	Item No.	Pack. Unit
black	770-503	50
white	770-513	50




Locking lever; for flying leads; manually operated		
Color	Item No.	PU   SPU
black	770-101	100   25
white	770-121	100   25



Locking lever; for flying leads; tool operated		
Color	Item No.	PU   SPU
black	770-111	100   25
white	770-131	100   25



Lockout cap; for socket; separable; 12-pole		
Color	Item No.	Pack. Unit
black	770-201	100
white	770-221	100



Lockout cap; for plug; separable; 5-pole		
Color	Item No.	Pack. Unit
yellow	770-360	100

## Snap-In Socket and Plug

### 3-Pole

### WINSTA® MIDI; 770 Series

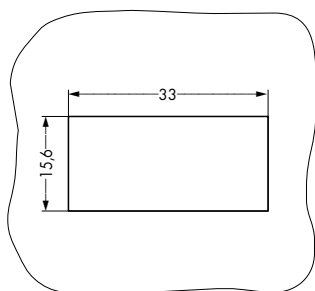


Plate thickness: 0.5 ... 2 mm  
Cutout tolerance: + 0.1 mm

- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

#### Electrical Data

Coding	A, P, R, S		
Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Rated voltage	250 V	–	–
Rated surge voltage	4 kV	–	–
Rated current	25 A	–	–
Approvals per	UL 1977		
Rated voltage (UL)	600 V		
Rated current (UL)	14 A		

Clearances and creepage distances	≥ 5.5 mm (with strain relief ≥ 6.5 mm to exposed surfaces – protection class II)
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

#### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm² / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm²

#### Mechanical Data

Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16$ A, 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 8 ... 11.5 mm
Protection type	IP2xC (with strain relief housing)

#### Material Data

Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

#### Environmental Requirements

Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Snap-In Socket and Plug

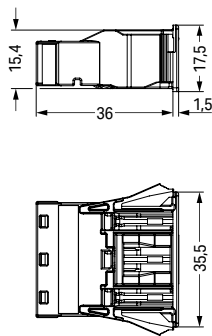
3-Pole

WINSTA® MIDI; 770 Series

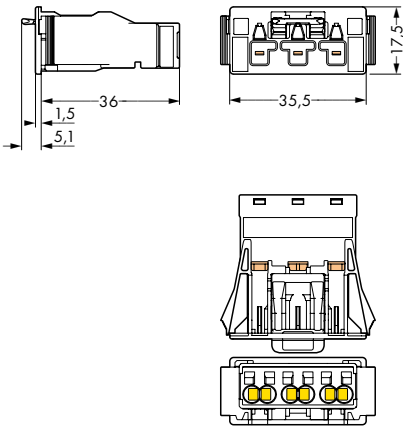
PUSH-IN CAGE CLAMP®



Dimensions in mm (figure shows A-coding):



Dimensions in mm (figure shows A-coding):



Socket				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	770-703	100
○ white	A	L ⊕ N	770-723	100
● red	P	L ⊕ N	770-2303	100
● orange	R	LON LON S	770-2343	100
● brown	S	1 2 L	770-2363	100

Plug				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	L ⊕ N	770-713	100
○ white	A	L ⊕ N	770-733	100
● red	P	L ⊕ N	770-2313	100
● orange	R	LON LON S	770-2353	100

Accessories; for all products on this page



Lockout cap; for cutout; 3-pole		
Color	Item No.	Pack. Unit
● black	770-643	100
○ white	770-693	100



Operating tool; partially insulated; 3-way		
Color	Item No.	Pack. Unit
● green	770-383	1



## Socket and Plug; without Strain Relief Housing

### 4-Pole

### WINSTA® MIDI; 770 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data						
Coding	A			Q		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	400 V	–	–	400 V	–	–
Rated surge voltage	6 kV	–	–	6 kV	–	–
Rated current	25 A	–	–	32 A	–	–
Approvals per	UL 1977					
Rated voltage (UL)	600 V					
Rated current (UL)	23 A					

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Solid conductor; push-in termination	1.5 ... 4 mm² / 16 ... 12 AWG
Stranded conductor	0.5 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 20 ... 16 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 25\text{ A}$ , 4 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 9 ... 13 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

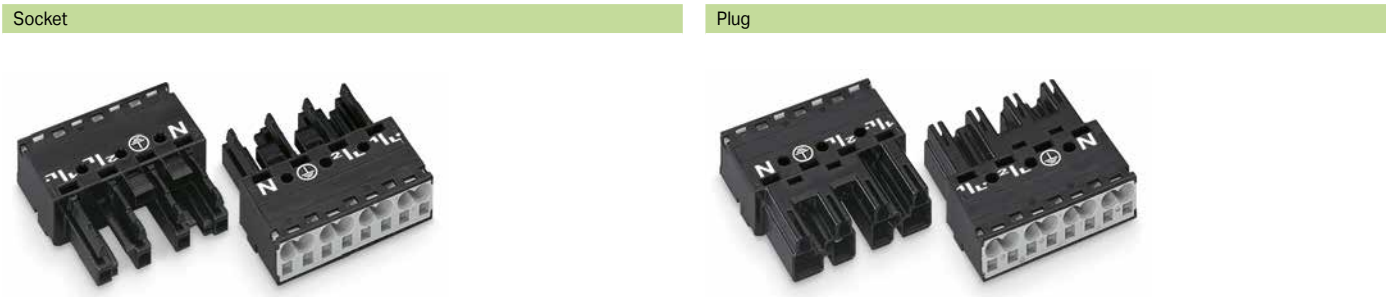
- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

4-Pole

WINSTA® MIDI; 770 Series

PUSH-IN CAGE CLAMP®



Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 2L 1L	770-204	50
○ white	A	N ⊕ 2L 1L	770-224	50

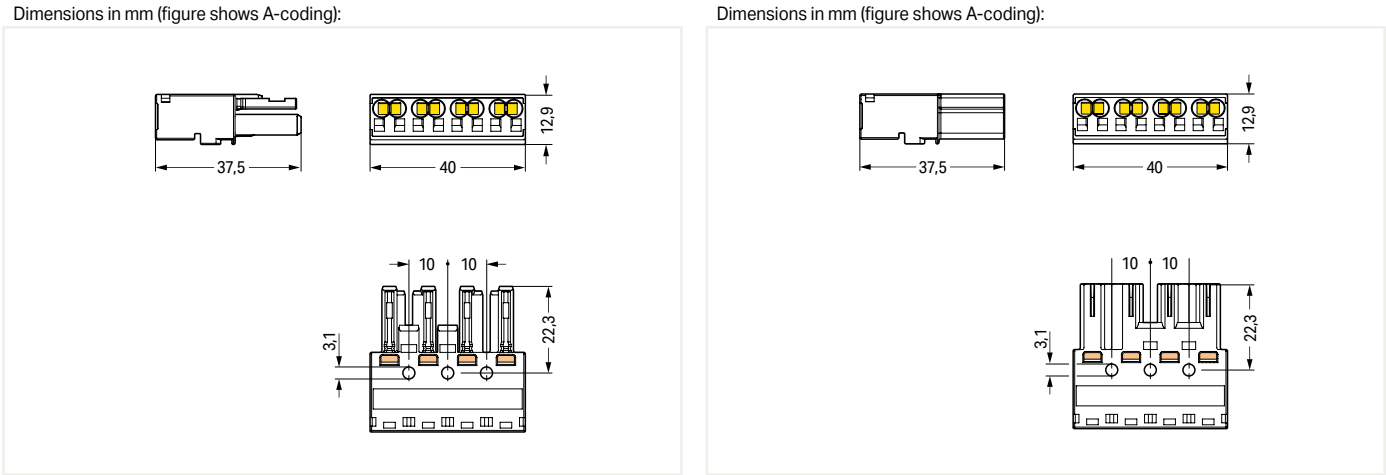
For "Clean Earth" applications; rated up to 32 A

Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 L	770-1324	50

Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 2L 1L	770-214	50
○ white	A	N ⊕ 2L 1L	770-234	50

For "Clean Earth" applications; rated up to 32 A

Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 L	770-1334	50



Accessories; for all products on this page

Strain relief housing; for two cables; 9 ... 13 mm cable diameter; 55 mm strip length		
Color	Item No.	Pack. Unit
black	770-504	50
white	770-514	50

Locking lever; for flying leads; manually operated		
Color	Item No.	PU   SPU
black	770-101	100   25
white	770-121	100   25

Locking lever; for flying leads; tool operated		
Color	Item No.	PU   SPU
black	770-111	100   25
white	770-131	100   25

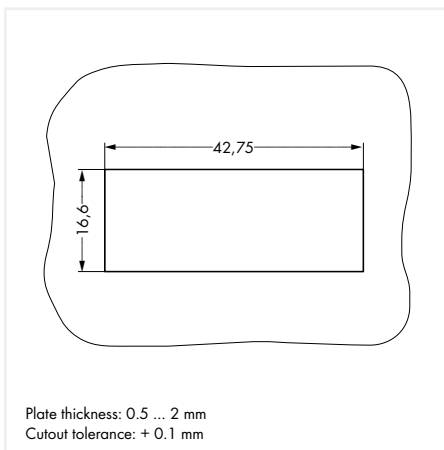
Lockout cap; for socket; separable; 12-pole		
Color	Item No.	Pack. Unit
black	770-201	100
white	770-221	100

Lockout cap; for plug; separable; 5-pole		
Color	Item No.	Pack. Unit
yellow	770-360	100

## Snap-In Socket and Plug

### 4-Pole

### WINSTA® MIDI; 770 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

#### Electrical Data

Coding	A			Q		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	400 V	–	–	400 V	–	–
Rated surge voltage	4 kV	–	–	6 kV	–	–
Rated current	25 A	–	–	32 A	–	–
Approvals per	UL 1977					
Rated voltage (UL)	600 V					
Rated current (UL)	14 A					

Clearances and creepage distances	≥ 5.5 mm (with strain relief ≥ 6.5 mm to exposed surfaces – protection class II)
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

#### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.5 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm²

#### Mechanical Data

Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16$ A, 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 9 ... 13 mm
Protection type	IP2xC (with strain relief housing)

#### Material Data

Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

#### Environmental Requirements

Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Snap-In Socket and Plug

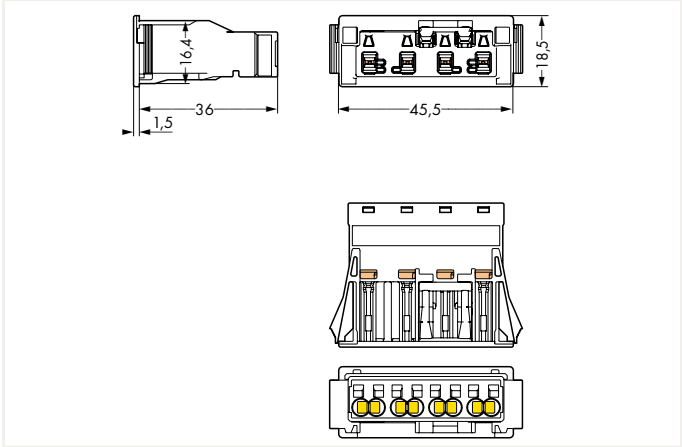
4-Pole

WINSTA® MIDI; 770 Series

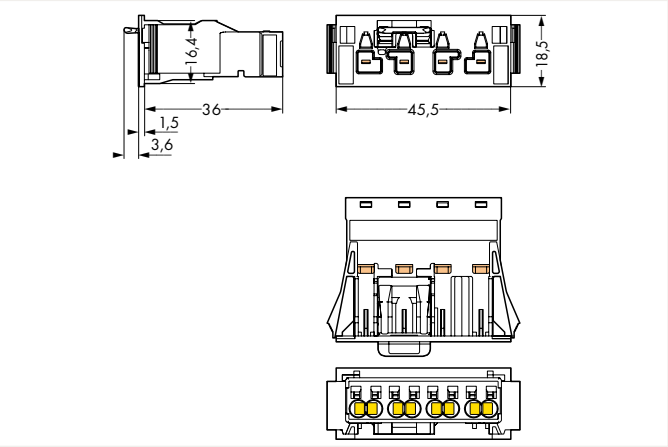
PUSH-IN CAGE CLAMP®



Dimensions in mm (figure shows A-coding):



Dimensions in mm (figure shows A-coding):



Socket				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 2L 1L	770-704	100
○ white	A	N ⊕ 2L 1L	770-724	100

For "Clean Earth" applications; rated up to 32 A				
Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 L	770-2324	100

Plug				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ 2L 1L	770-714	100
○ white	A	N ⊕ 2L 1L	770-734	100

For "Clean Earth" applications; rated up to 32 A				
Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 L	770-2334	100

Accessories; for all products on this page



Lockout cap; for cutout; 4-pole		
Color	Item No.	Pack. Unit
● black	770-644	100
○ white	770-694	100



Operating tool with a partially insulated shaft; type 1; (2.5 x 0.4) mm blade		
Color	Item No.	Pack. Unit
● green	210-719	1

## Socket and Plug; without Strain Relief Housing

### 5-Pole

### WINSTA® MIDI; 770 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

Electrical Data						
Coding	A, I, L, P			Q		
Ratings per	IEC/EN 60664-1			IEC/EN 60664-1		
Overvoltage category	III	III	II	III	III	II
Pollution degree	3	2	2	3	2	2
Rated voltage	400 V	–	–	400 V	–	–
Rated surge voltage	6 kV	–	–	6 kV	–	–
Rated current	25 A	–	–	32 A	–	–
Approvals per	UL 1977					
Rated voltage (UL)	600 V					
Rated current (UL)	23 A					

Clearances and creepage distances	≥ 5.5 mm to exposed surfaces
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

Connection Data	
Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Solid conductor; push-in termination	1.5 ... 4 mm² / 16 ... 12 AWG
Stranded conductor	0.5 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor	0.5 ... 4 mm² / 20 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm² / 20 ... 16 AWG

Mechanical Data	
Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 25\text{ A}$ , 4 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 9 ... 13 mm
Protection type	IP2xC (with strain relief housing)

Material Data	
Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

Environmental Requirements	
Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Socket and Plug

5-Pole

WINSTA® MIDI; 770 Series

PUSH-IN CAGE CLAMP®

Socket

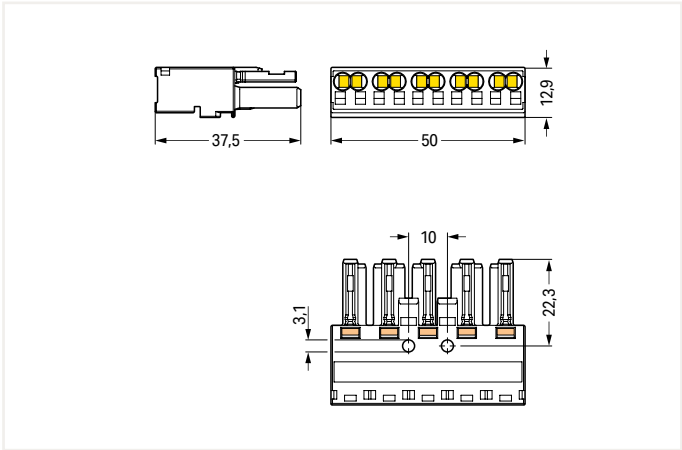
Plug



Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ L1 L2 L3	770-205	50
○ white	A	N ⊕ L1 L2 L3	770-225	50
● blue	I	N ⊕ L DA- DA+	770-1105	50
● dark gray	L	N ⊕ L N' L'	770-1165	50
● red	P	N ⊕ L1 L2 L3	770-1305	50

For "Clean Earth" applications; rated up to 32 A				
Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 PE3 L	770-1325	50

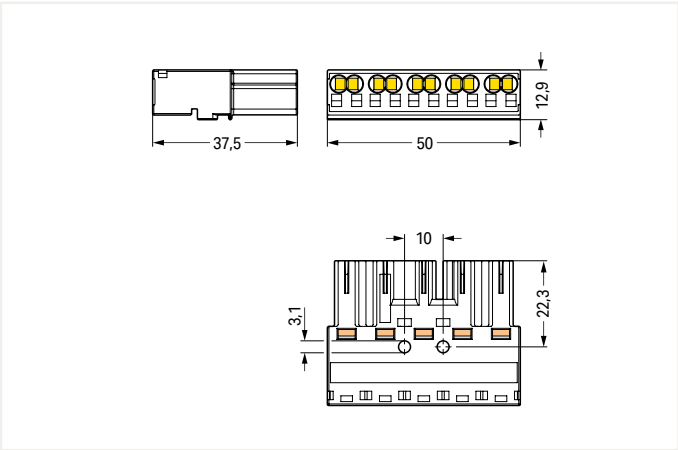
Dimensions in mm (figure shows A-coding):



Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ L1 L2 L3	770-215	50
○ white	A	N ⊕ L1 L2 L3	770-235	50
● blue	I	N ⊕ L DA- DA+	770-1115	50
● dark gray	L	N ⊕ L N' L'	770-1175	50
● red	P	N ⊕ L1 L2 L3	770-1315	50

For "Clean Earth" applications; rated up to 32 A				
Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 PE3 L	770-1335	50

Dimensions in mm (figure shows A-coding):



Accessories; for all products on this page



Strain relief housing; for two cables; 9 ... 13 mm cable diameter; 55 mm strip length		
Color	Item No.	Pack. Unit
black	770-505	25
white	770-515	25



Locking lever; for flying leads; manually operated		
Color	Item No.	PU   SPU
black	770-101	100   25
white	770-121	100   25



Locking lever; for flying leads; tool operated		
Color	Item No.	PU   SPU
black	770-111	100   25
white	770-131	100   25



Lockout cap; for socket; separable; 12-pole		
Color	Item No.	Pack. Unit
black	770-201	100
white	770-221	100



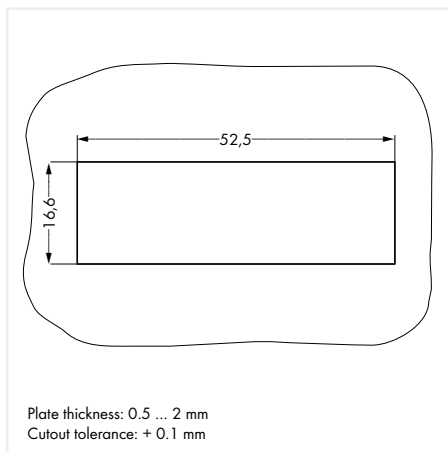
Lockout cap; for plug; separable; 5-pole		
Color	Item No.	Pack. Unit
yellow	770-360	100



## Snap-In Socket and Plug

### 5-Pole

### WINSTA® MIDI; 770 Series



- Installation connectors are designed for connection and disconnection while not under load.
- There is no hazard-inducing interchangeability with systems based on IEC 60309, IEC 60320, IEC 60906 and with national connector and socket systems.
- Compliance with the standards (IEC 61535) does not guarantee hazard-preventing, non-interchangeability with installation connector systems from various manufacturers.
- Installation connector systems are not a substitute for residential connector/socket systems.

#### Electrical Data

Coding	A, I, P			Q		
	IEC/EN 60664-1			IEC/EN 60664-1		
Ratings per	III	III	II	III	III	II
Overvoltage category	3	2	2	3	2	2
Pollution degree	400 V	–	–	400 V	–	–
Rated voltage	4 kV	–	–	6 kV	–	–
Rated surge voltage	25 A	–	–	32 A	–	–
Rated current	UL 1977					
Approvals per	600 V					
Rated voltage (UL)	14 A					
Rated current (UL)						

Clearances and creepage distances	≥ 5.5 mm (with strain relief ≥ 6.5 mm to exposed surfaces – protection class II)
Contact resistance	Approx. 1 mΩ (approx. 0.25 mΩ contact transition socket – plug)

#### Connection Data

Connection technology	Push-in CAGE CLAMP®
Strip length	9 mm / 0.35 inch
Conductor range	
Solid conductor	0.5 ... 4 mm² / 22 ... 12 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm² / 20 ... 16 AWG
Stranded conductor	0.5 ... 2.5 mm² / 20 ... 14 AWG
Fine-stranded conductor	0.25 ... 1.5 mm² / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm²

#### Mechanical Data

Mating cycles	200 (without resistive load) 100 (with resistive load $I_N = 16$ A, 1.5 mm²)
Mating forces	20 ... 70 Nm (depending on pole number)
Unmating forces	20 ... 70 Nm (depending on pole number); when unlocked
Retention forces	> 80 Nm; unlocked
Cable diameter	Ø 3.8 ... 8.2 mm
Protection type	IP2xC (with strain relief housing)

#### Material Data

Insulation material	Polyamide 66 (PA 66)
Contact material	Electrolytic copper ( $E_{Cu}$ )
Contact plating	Tin-plated
Clamping spring material	Chrome nickel spring steel (CrNi)

#### Environmental Requirements

Processing temperature	–5 ... +40 °C
Continuous operating temperature:	–35 ... +85 °C

#### Note:

- All connectors for mounted installations (snap-in versions, pluggable PCB connectors, distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for "flying leads" (plug/socket).
- Codings feature a mechanical protection against mismatching.

Snap-In Socket and Plug

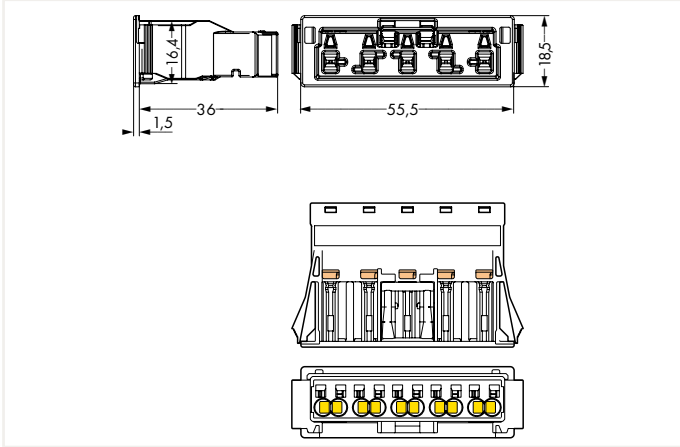
5-Pole

WINSTA® MIDI; 770 Series

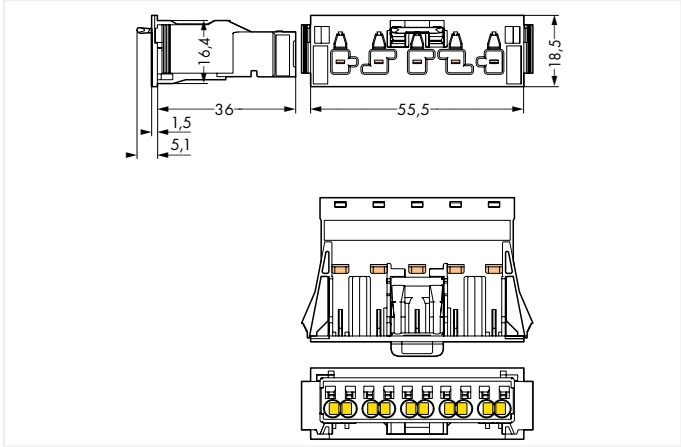
PUSH-IN CAGE CLAMP®



Dimensions in mm (figure shows A-coding):



Dimensions in mm (figure shows A-coding):



Socket				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ L1 L2 L3	770-705	50
○ white	A	N ⊕ L1 L2 L3	770-725	50
● blue	I	N ⊕ L DA- DA+	770-2105	50
● red	P	N ⊕ L1 L2 L3	770-2305	50

For "Clean Earth" applications; rated up to 32 A				
Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 PE3 L	770-2325	50

Plug				
Color	Coding	Marking	Item No.	Pack. Unit
● black	A	N ⊕ L1 L2 L3	770-715	50
○ white	A	N ⊕ L1 L2 L3	770-735	50
● blue	I	N ⊕ L DA- DA+	770-2115	50
● red	P	N ⊕ L1 L2 L3	770-2315	50

For "Clean Earth" applications; rated up to 32 A				
Color	Coding	Marking	Item No.	Pack. Unit
● green	Q	N PE1 PE2 PE3 L	770-2335	50

Accessories; for all products on this page



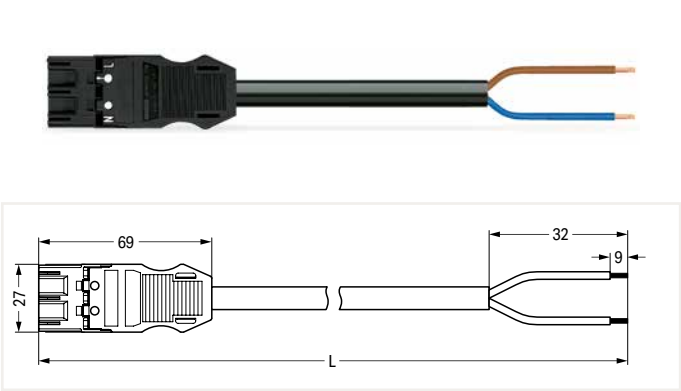
Lockout cap; for cutout; 5-pole		
Color	Item No.	Pack. Unit
● black	770-645	100
○ white	770-695	100



Operating tool with a partially insulated shaft; type 1; (2.5 x 0.4) mm blade		
Color	Item No.	Pack. Unit
● green	210-719	1

Cable Assembly

WINSTA® MIDI; 771 Series



1 mm²; Plug/open-ended; Pole number: 3; E <sub>ca</sub> : A-coding; PVC			
Length	Connector color/strain relief color		
	black/black		Pack. Unit
0.5 m	771-5001/185-000		1

1 mm²; Plug/open-ended; Pole number: 3; E <sub>ca</sub> : A-coding; PVC			
Length	Connector color/strain relief color		
	white/white		Pack. Unit
0.5 m	771-5001/186-000		1

## Linect® Box

Available July 2020



### Unlimited Freedom in LED Light Design

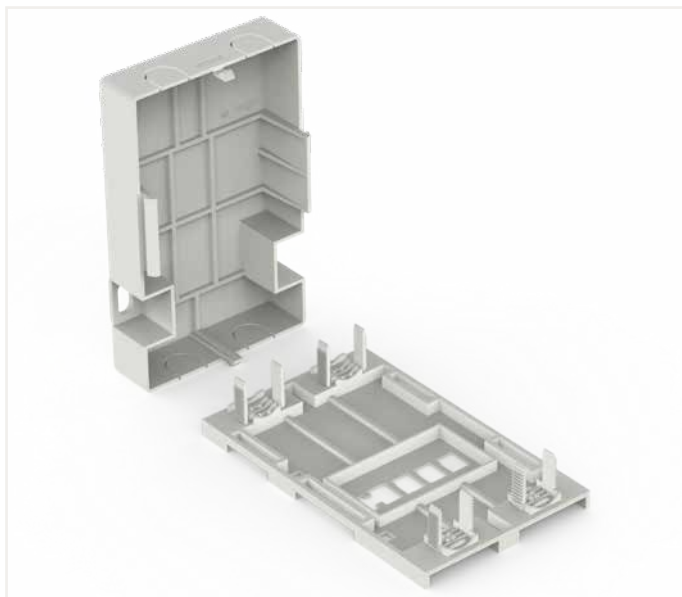
New Lighting Connection Box: A Connection Solution for All Installation Types

Increasing miniaturization and popular flat LED lights requires universal connection options. WAGO's new lighting connection box offers the best solution because it is housed outside the light. This gives lighting manufacturers more design freedom. In addition, no dirt and dust can get into the light during installation because it no longer has to be opened for the connection. The new box has ample installation space and is suitable for a large range of conductor cross-sections up to  $5 \times 2.5 \text{ mm}^2$ . Regardless of how the project is installed, lights with the WAGO Lighting Connection Box fit into every concept – it doesn't matter if you choose a pluggable building installation, such as the WAGO Pluggable Connection System WINSTA® or a conventional installation type. The integrated Linect® interface also contributes to this, for which a connector with a conventional conductor connection is also available in addition to the pluggable version.

#### Advantages:

- Perfect connection technology for very flat lights
- A connection solution, regardless of the installation type
- Perfect connection space for conductor cross sections up to  $5 \times 2.5 \text{ mm}^2$








Connection box for lighting and electrical equipment with Linect® interface  
Item No. 899-8005





## WAGO Installation Connectors

## WAGO Installation Connectors

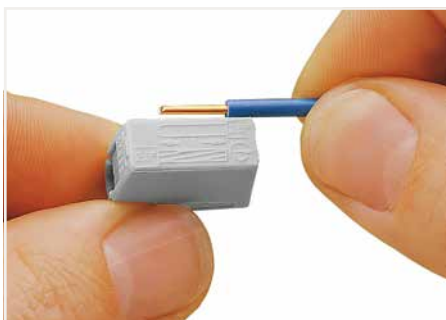
			Page
	Lighting Connectors Service Connectors	224 Series	235
	COMPACT PUSH WIRE® Junction Box Connectors for Solid Conductors 2.5 mm²	2273 Series	237
	PUSH WIRE® Junction Box Connectors for Solid Conductors 6 mm² Ex PUSH WIRE® Junction Box Connectors	773 Series	239
	COMPACT PUSH WIRE® Junction Box Connectors for Solid and Stranded Conductors 4 mm²	2773 Series	243
	COMPACT Splicing Connectors for all Conductor Types Ex COMPACT Splicing Connectors for all Conductor Types	221 Series 221 Series	245 249
	Mounting Carriers for Single Connectors	221 Series	247
	Splicing Connectors for All Conductor Types	222 Series	251
	MICRO PUSH WIRE® Junction Box Connectors	243 Series	253



## Lighting Connectors and Service Connectors

### Description and Installation

#### 224 Series



Strip conductor to 9 ... 11 mm (0.35 ... 0.43 inch).



To connect: Press button fully, insert stripped conductor into square entry and release.



To remove: Press button and withdraw conductor.

#### Lighting side

CAGE CLAMP®  
terminates the following  
copper conductors:



solid



stranded



fine-stranded, also with tinned single strands



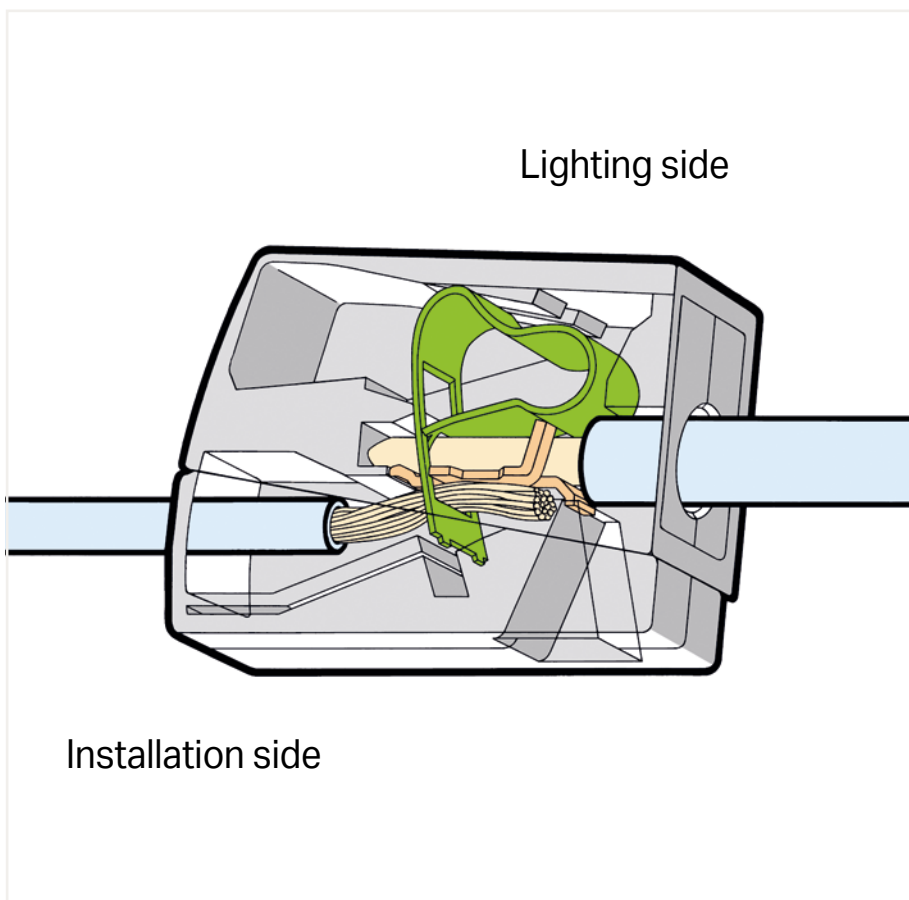
fine-stranded, tinned (up to 1.5 mm² / 16 AWG)



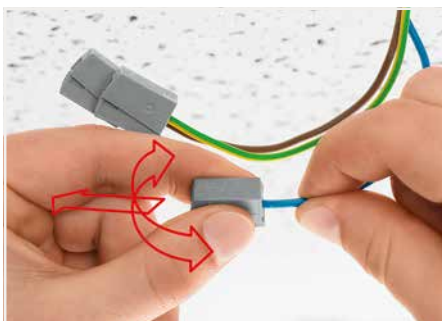
fine-stranded, tip bonded



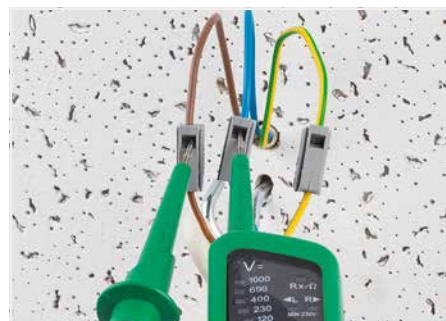
fine-stranded with ferrule (up to 1.5 mm² / 16 AWG)



To connect: Insert stripped solid conductor into circular entry and push until it hits the backstop.



To remove: Hold conductor to be removed and twist alternately left and right while slightly pulling the connector.



Testing via separate test ports.

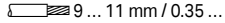


#### Installation side

PUSH WIRE®  
terminates the following copper conductors:  
solid

Lighting Connector; Service Connector

224 Series

Technical Data	
Installation side	
1 ... 2.5 mm² "s"	14 ... 12 AWG
Lighting side	
0.5 ... 2.5 mm² "s+f-st"	20 ... 16 AWG
400 V / 4 kV / 2 ①; I <sub>N</sub> 24 A	300 V / 20 A ②③
	



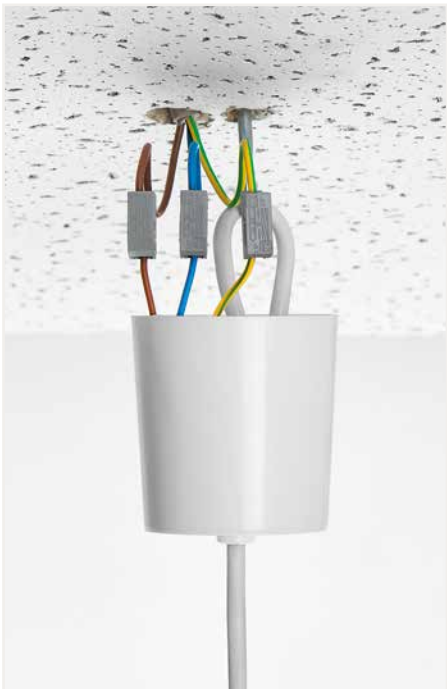
Lighting connector; standard version; approved continuous operating temperature: 105°C; ambient temperature (max.): 60°C		
Color	Item No.	Pack. Unit
○ gray	224-101	1000 (10x100)

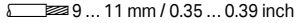
Lighting connector; version for increased continuous operating temperature of 120°C; ambient temperature (max.): 75°C		
Color	Item No.	Pack. Unit
● black	224-104	1000 (10x100)

224 Series Accessories



Syringe; contains 20 ml "Alu-Plus" contact paste		
	Item No.	Pack. Unit
	249-130	20



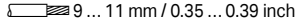
Technical Data	
Installation side	
2 x 1 ... 2.5 mm² "s"	14 ... 12 AWG
Lighting side	
0.5 ... 2.5 mm² "s+f-st"	20 ... 16 AWG
400 V / 4 kV / 2 ①; I <sub>N</sub> 24 A	300 V / 20 A ②③
	



2-conductor lighting connector; for looping through on the installation side; approved continuous operating temperature: 105°C; ambient temperature (max.): 60°C		
Color	Item No.	Pack. Unit
○ white	224-112	1000 (10x100)

2-conductor lighting connector; for looping through on the installation side; version for increased continuous operating temperature of 120°C; ambient temperature (max.): 75°C		
Color	Item No.	Pack. Unit
● black	224-114	1000 (10x100)



Technical Data	
0.5 ... 2.5 mm² "s+f-st"	20 ... 16 AWG
400 V / 4 kV / 2 ①; I <sub>N</sub> 24 A	300 V / 20 A ②
	



Service connector; approved continuous operating temperature: 105°C		
Color	Item No.	Pack. Unit
○ gray	224-201	50

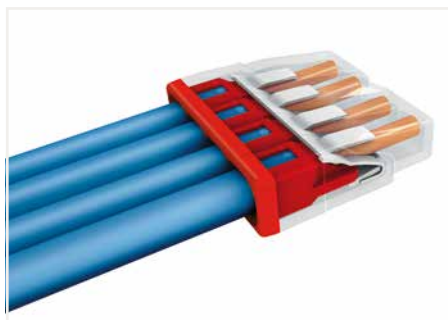
WAGO's lighting connectors ideally connect solid conductors with fine-stranded conductors. Tested and approved as isolated splicing connectors per EN 60998, WAGO's 224 Series Lighting Connectors can also be used in applications requiring a connection between solid and fine-stranded conductors. For example, 224 Series connects:	
»	
• Blinds, sliding shutters or awning motors	
• Window or bathroom fans	
• Circulation pumps	
• Furnace control systems	
• Electrical devices via permanent flexible cables	
① In grounded power lines	
400 V = rated voltage	
» 4 kV = rated surge voltage	
2/3 = pollution degree	



# COMPACT PUSH WIRE® Connectors for Junction Boxes and Solid Conductors

## Description and Installation

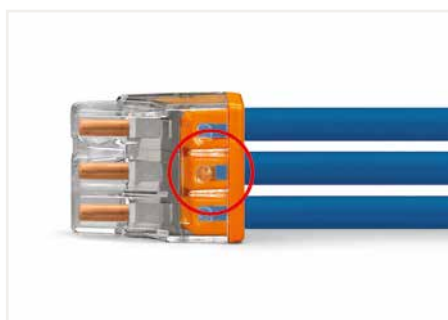
### 2273 Series



Strip solid conductor to 11 mm/0.43 inch (see marking).



Insert the stripped solid conductor until it hits backstop.



The transparent housing shows if conductors are fully inserted; within the colored base, a clear port shows if the conductor's strip length is correct. Conductors are correctly stripped if the clear port shows no bare conductor on the unprinted connector side. Picture shows center conductor with exceeded strip length.



Removal: Hold conductor to be removed and twist alternately left and right while pulling the connector.



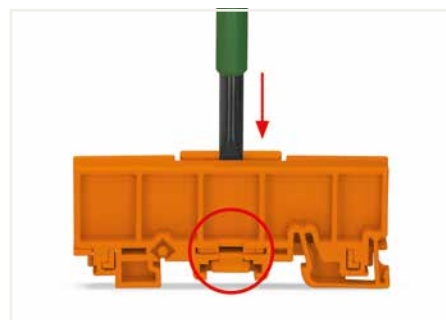
Testing via test port opposite to conductor entry.

8

One single carrier can hold up to 24 clamping units in a very narrow space. Previously, this was only possible using rail-mount terminal blocks.

#### Advantages:

- Mount carrier onto DIN-35 rail or via screws – easily and quickly
- Accommodate three 2.5 mm<sup>2</sup> (12 AWG) 2273 Series Connectors in a single carrier
- Easily exchange connectors
- Large marking area for self-adhesive marking strips or for direct marking with permanent felt-tip pen



To adjust the mounting carrier, unlock the latch via operating tool (5.5 mm blade) and move the clamping slide to the required width by rotating the tool.



The mounting carrier is suitable for both connector widths.



PUSH WIRE® terminates the following copper conductors:  
solid

#### PUSH WIRE® Connectors in Distribution Boxes

During distribution box retrofits or expansions, conductors often require extensions or additional clamping points. Individual PUSH WIRE® connectors (e.g., 2273 Series) are approved as interconnect components for building wiring applications per EN 60998. Application standards for building installation (e.g., Parts 510 and 520 from DIN VDE 0100) also place the following requirements on junction box connectors:



- They must be arranged so that operation, inspection, maintenance and access to the removable connectors is simplified.
- It must be possible to test them.
- Conductors connected from outside must be clearly and permanently assigned to their associated circuits.

These requirements cannot be met with PUSH WIRE® connectors alone. In combination with WAGO mounting carriers, the PUSH WIRE® connectors clearly meet these requirements, making them comparable to rail-mount terminal blocks. Using PUSH WIRE® connectors with mounting carriers in distribution boxes is accepted by testing authorities.




COMPACT PUSH WIRE® Connector for Junction Boxes

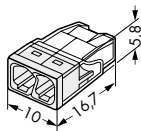
2273 Series



Technical Data	
0,5 ... 2,5 mm² „s“	20 ... 16 AWG „s“
450 V / 4 kV / 2; I <sub>N</sub> 24 A	600 V / 20 A 
 11 mm / 0.43 inch	





COMPACT PUSH WIRE® connector for junction boxes; 2-wire connector; transparent housing; continuous operating temperature (max.): 105°C; ambient temperature (max.): 60°C		
Color	Item No.	Pack. Unit
 white	2273-202	1000 (10x100)


Dimensions (in mm):



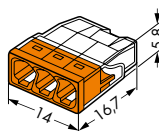
Technical Data	
0,5 ... 2,5 mm² „s“	20 ... 16 AWG „s“
450 V / 4 kV / 2; I <sub>N</sub> 24 A	600 V / 20 A 
 11 mm / 0.43 inch	



Technical Data	
0,5 ... 2,5 mm² „s“	20 ... 16 AWG „s“
450 V / 4 kV / 2; I <sub>N</sub> 24 A	600 V / 20 A 
 11 mm / 0.43 inch	





COMPACT PUSH WIRE® connector for junction boxes; 3-wire connector; transparent housing; continuous operating temperature (max.): 105°C; ambient temperature (max.): 60°C		
Color	Item No.	Pack. Unit
 orange	2273-203	1000 (10x100)


Dimensions (in mm):



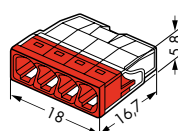
Technical Data	
0,5 ... 2,5 mm² „s“	20 ... 16 AWG „s“
450 V / 4 kV / 2; I <sub>N</sub> 24 A	600 V / 20 A 
 11 mm / 0.43 inch	


Technical Data	
0,5 ... 2,5 mm² „s“	20 ... 16 AWG „s“
450 V / 4 kV / 2; I <sub>N</sub> 24 A	600 V / 20 A 
 11 mm / 0.43 inch	



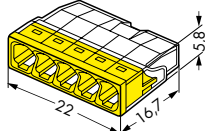
COMPACT PUSH WIRE® connector for junction boxes; 4-wire connector; transparent housing; continuous operating temperature (max.): 105°C; ambient temperature (max.): 60°C		
Color	Item No.	Pack. Unit
 red	2273-204	1000 (10x100)


Dimensions (in mm):



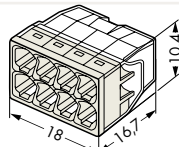
COMPACT PUSH WIRE® connector for junction boxes; 5-wire connector; transparent housing; continuous operating temperature (max.): 105°C; ambient temperature (max.): 60°C		
Color	Item No.	Pack. Unit
 yellow	2273-205	1000 (10x100)

Dimensions (in mm):




COMPACT PUSH WIRE® connector for junction boxes; 8-wire connector; transparent housing; continuous operating temperature (max.): 105°C; ambient temperature (max.): 60°C		
Color	Item No.	Pack. Unit
 light gray	2273-208	500 (10x50)

Dimensions (in mm):




2273 Series Accessories



Mounting carrier; for single- and double-row 2273 Series Connectors; carrier width: 14/18.5 mm		
Color	Item No.	Pack. Unit
 orange	2273-500	50

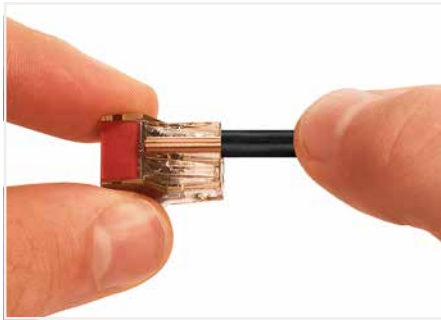
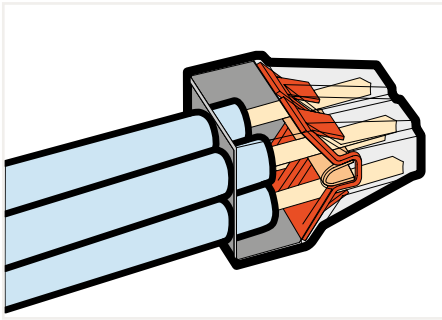


Self-adhesive marking strip; plain; 5 mm high; 48 self-adhesive strips per card		
Color	Item No.	Pack. Unit
 white	210-334	1

## PUSH WIRE® Connectors for Junction Boxes

### Description and Installation

#### 773 Series



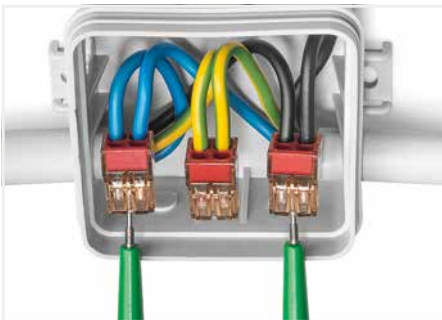
Strip a solid conductor to 12 mm (0.47 inch).



Termination: Insert stripped solid conductor until it hits backstop.



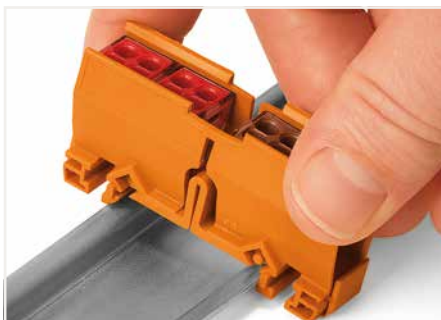
Removal: Hold conductor to be removed and twist alternately left and right while pulling the connector.



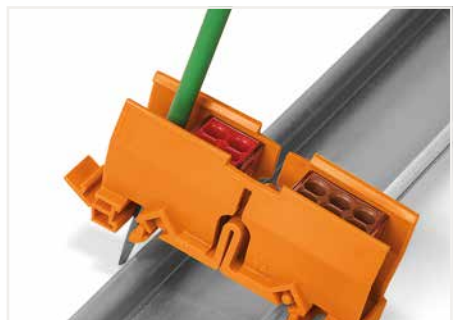
Testing



Use the cover as an end plate.



Snap the mounting carrier onto the DIN-rail.



Remove the mounting carrier from the DIN-rail.

# PUSH WIRE® Connector for Junction Boxes

## 773 Series

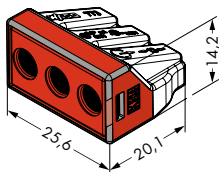
Technical Data	
3 x 2.5 ... 6 mm² "s+st"	3 x 14 ... 10 AWG "s+st"
400 V / 4 kV / 2 I <sub>N</sub> : 1 41 A	600 V; 30 A I <sub>N</sub> / 20 A I <sub>SC</sub>
12 ... 13 mm / 0.47 ... 0.51 inch	



PUSH WIRE® connector for junction boxes; 3-wire connector; transparent housing; continuous operating temperature (max.): 105°C; ambient temperature (max.): 60°C

Color	Item No.	Pack. Unit
● red	773-173	500 (10x50)

Dimensions (in mm):



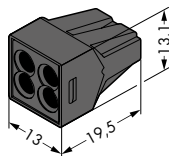
Technical Data	
4 x 0.75 ... 2.5 mm² "s"	4 x 18 ... 12 AWG "s"
4 x 1.5 ... 2.5 mm² "st"	4 x 16 ... 12 AWG "st"
400 V / 4 kV / 2 I <sub>N</sub> : 24 A	600 V; 20 A I <sub>N</sub> I <sub>SC</sub>
12 mm / 0.47 inch	



PUSH WIRE® connector for junction boxes; 4-wire connector; transparent housing; continuous operating temperature (max.): 150°C; ambient temperature (max.): 60°C

Color	Item No.	Pack. Unit
● black	773-514	100

Dimensions (in mm):



### 773 Series Accessories



Mounting carrier; carrier width: 18 mm		
Color	Item No.	Pack. Unit
● orange	773-332	50



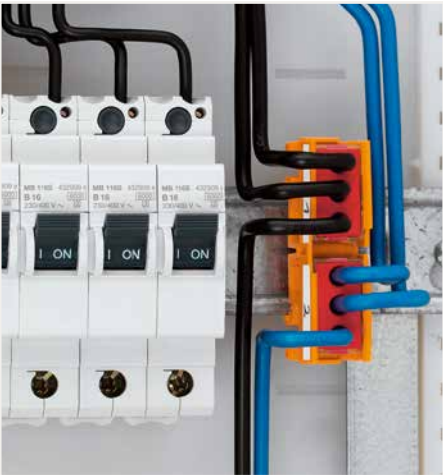
Self-adhesive marking strip; plain; 5 mm high; 48 self-adhesive strips per card		
Color	Item No.	Pack. Unit
○ white	210-334	1

A mounting carrier (see accessories) suits applications where the connector must be marked and secured in position. The mounting carrier fits up to two 6 mm² connectors and must be snapped directly onto the DIN-35 rail or secured to a smooth surface by two screws.

Using this PUSH WIRE® connector, a large range of wiring applications can be achieved in distribution or junction boxes. To mention just a few: potential multiplication and changing from or to 6 mm² (10 AWG) conductor size.

» Approvals are available online at: [www.wago.com](http://www.wago.com)


1 In grounded power lines  
400 V = rated voltage  
» 4 kV = rated surge voltage  
2 = pollution degree






## Ex PUSH WIRE® Connector for Junction Boxes 773 Series

### Technical Data

0.75 ... 2.5 mm² "s"	18 ... 12 AWG "s"
550 V*; I <sub>N</sub> 24 A	600 V; 20 A
 12 mm / 0.47 inch	

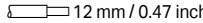


### Technical Data

0.75 ... 2.5 mm² "s"	18 ... 12 AWG "s"
550 V*; I <sub>N</sub> 24 A	600 V; 20 A
 12 mm / 0.47 inch	



### Technical Data

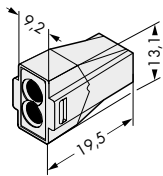
0.75 ... 2.5 mm² "s"	18 ... 12 AWG "s"
550 V*; I <sub>N</sub> 24 A	600 V; 20 A
 12 mm / 0.47 inch	



PUSH WIRE® connector for junction boxes; 2-wire connector; suitable for Ex e II applications

Color	Item No.	Pack. Unit
○ light gray	773-492	1000 (10x100)

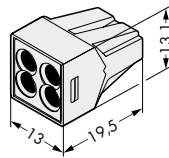
Dimensions (in mm):



PUSH WIRE® connector for junction boxes; 4-wire connector; suitable for Ex e II applications

Color	Item No.	Pack. Unit
○ light gray	773-494	1000 (10x100)

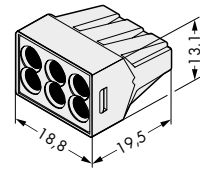
Dimensions (in mm):



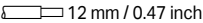
PUSH WIRE® connector for junction boxes; 6-wire connector; suitable for Ex e II applications

Color	Item No.	Pack. Unit
○ light gray	773-496	500

Dimensions (in mm):

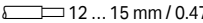


### Technical Data

0.75 ... 2.5 mm² "s"	18 ... 12 AWG "s"
550 V*; I <sub>N</sub> 24 A	600 V; 20 A
 12 mm / 0.47 inch	



### Technical Data

2.5 ... 6 mm² "s"	14 ... 10 AWG "s"
550 V*; I <sub>N</sub> 42 A	600 V; 20 A
 12 ... 15 mm / 0.47 ... 0.59 inch	



- » To be used only in conjunction with 773-331 Mounting Carrier.
- » \*275 V at a distance < 10 mm to parts of other potentials

### Accessories

Mounting carrier; carrier width: 18 mm

light gray	773-331	50
------------	---------	----



Self-adhesive marking strip; plain; 5 mm high; 48 self-adhesive strips per card

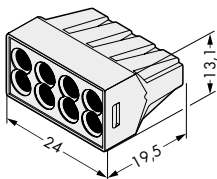
white	210-334	1
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PUSH WIRE® connector for junction boxes; 8-wire connector; suitable for Ex e II applications

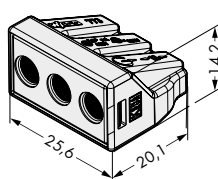
Color	Item No.	Pack. Unit
○ light gray	773-498	500

Dimensions (in mm):



PUSH WIRE® connector for junction boxes; 3-wire connector; suitable for Ex e II applications

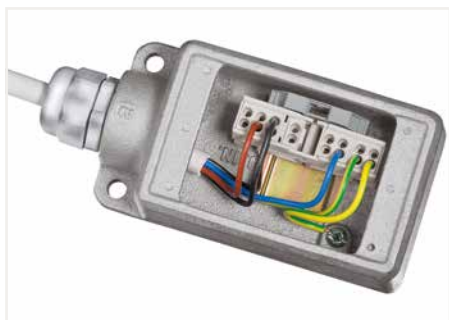
Color	Item No.	Pack. Unit
○ light gray	773-493	500 (10x50)



## Ex PUSH WIRE® Connectors for Junction Boxes

### Installation

### 773 Series



Wiring example in an Ex junction box



Insert the connectors into the carrier.



Use the cover as an end plate.



Snap the mounting carrier onto the DIN-rail.



Remove the mounting carrier from the DIN-rail.

WAGO's Ex PUSH WIRE® connectors are ideal for distribution and junction boxes, as well as control and operating systems. When used in hazardous areas, they offer the following advantages over traditional connectors:

- Time- and cost-saving PUSH WIRE® connection
- Vibration-proof, maintenance-free connections
- 100% touch-proof
- Connectors can be secured in position via mounting carriers
- One single carrier equipped with 2-, 4-, 6- and 8-wire connectors holds up to 16 clamping units according to user requirements, saving materials and related costs
- Available as OEM products for manufacturers and suppliers of enclosures and distribution boxes used in hazardous areas

# COMPACT PUSH WIRE® Junction Box Connectors for Solid and Stranded Conductors

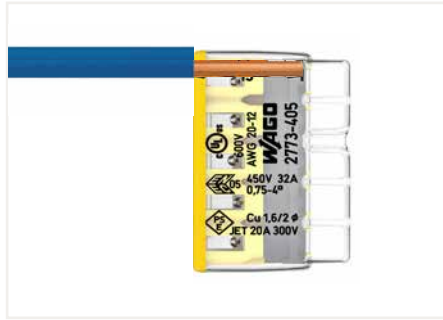
## Description and Installation

### 2773 Series



#### Advantages:

- Convenient wiring via extremely compact design
- Push-in termination of up to eight solid and stranded conductors
- Conductor range: 0.75 ... 4 mm<sup>2</sup> "s" and 1.5 ... 4 mm<sup>2</sup> "st"
- Any combination of conductor sizes is possible
- PUSH WIRE® connection terminates solid ("s") copper conductors



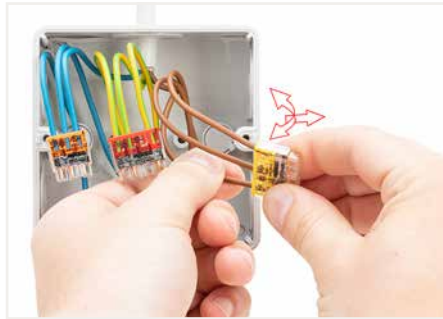
Strip solid or stranded conductor to 13 mm (0.51 inch).



Termination: Insert the stripped conductor until it hits the backstop.



The transparent housing shows if conductors are fully inserted; within the colored base, a clear port shows if the conductor's strip length is correct. Conductors are correctly stripped if the clear port shows no bare conductor on the unprinted connector side. Picture shows center conductor with exceeded strip length.



Removal: Hold solid conductor to be removed and twist alternately left and right while pulling the connector.



Testing via test port opposite to conductor entry.

8



Solid and stranded conductors of different cross-sections can be securely connected.



Solid conductors are inserted into the connector by simply pushing them in.



Stranded conductors are inserted into the connector by simply pushing them in.



Thanks to their flat and compact design, these connectors are ideal for wiring in flush-mount switch boxes.



With six variants, always have the right connector.



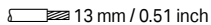
The mounting carrier is suitable for both connector widths.

COMPACT PUSH WIRE® Junction Box Connectors for Solid and Stranded Conductors

4 mm²; 2773 Series

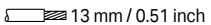
Technical Data

0.75 ... 4 mm² "s"	20 ... 12 AWG "s"
1.5 ... 4 mm² "st"	18 ... 12 AWG "st"
1.6 ... 2 mm Ø "s"	
450 V/4 kV/2	600 V, 20 A-Ⓢ
I <sub>N</sub> 32 A	

 13 mm / 0.51 inch


Technical Data

0.75 ... 4 mm² "s"	20 ... 12 AWG "s"
1.5 ... 4 mm² "st"	18 ... 12 AWG "st"
1.6 ... 2 mm Ø "s"	
450 V/4 kV/2	600 V, 20 A-Ⓢ
I <sub>N</sub> 32 A	

 13 mm / 0.51 inch

Technical Data

0.75 ... 4 mm² "s"	20 ... 12 AWG "s"
1.5 ... 4 mm² "st"	18 ... 12 AWG "st"
1.6 ... 2 mm Ø "s"	
450 V/4 kV/2	600 V, 20 A-Ⓢ
I <sub>N</sub> 32 A	

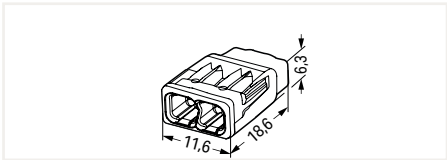
 13 mm / 0.51 inch



COMPACT PUSH WIRE® connector for junction boxes;  
2-wire connector; Transparent housing; White cover;  
Continuous operating temperature (max.): 105 °C;  
Surrounding air temperature (max.): 85 °C (T85)

Item No.	Pack. Unit
2773-402	1200 (120)

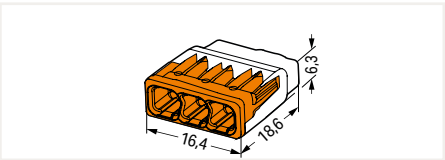
Dimensions in mm



COMPACT PUSH WIRE® connector for junction boxes;  
3-wire connector; Transparent housing; Orange cover;  
Continuous operating temperature (max.): 105 °C;  
Surrounding air temperature (max.): 85 °C (T85)

Item No.	Pack. Unit
2773-403	1000 (100)

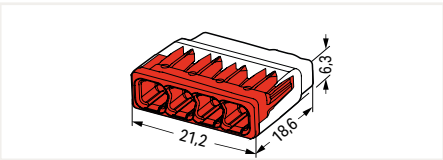
Dimensions in mm



COMPACT PUSH WIRE® connector for junction boxes;  
4-wire connector; Transparent housing; Red cover; Con-  
tinuous operating temperature (max.): 105 °C;  
Surrounding air temperature (max.): 85 °C (T85)

Item No.	Pack. Unit
2773-404	800 (80)

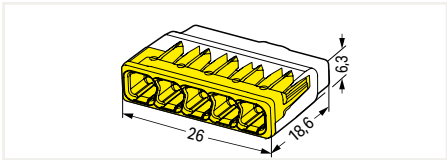
Dimensions in mm



COMPACT PUSH WIRE® connector for junction boxes;  
5-wire connector; Transparent housing; Yellow cover;  
Continuous operating temperature (max.): 105 °C;  
Surrounding air temperature (max.): 85 °C (T85)

Item No.	Pack. Unit
2773-405	600 (60)

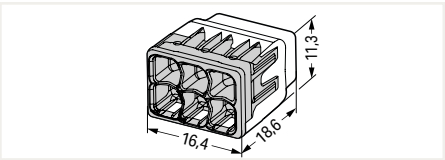
Dimensions in mm



COMPACT PUSH WIRE® connector for junction boxes;  
6-wire connector; Transparent housing; Gray cover;  
Continuous operating temperature (max.): 105 °C;  
Surrounding air temperature (max.): 85 °C (T85)

Item No.	Pack. Unit
2773-406	500 (50)

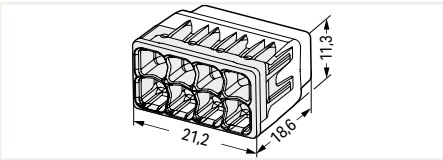
Dimensions in mm



COMPACT PUSH WIRE® connector for junction boxes;  
8-wire connector; Transparent housing; Light gray cover;  
Continuous operating temperature (max.): 105 °C;  
Surrounding air temperature (max.): 85 °C (T85)

Item No.	Pack. Unit
2773-408	400 (40)


Dimensions in mm



Accessories


Mounting carrier; for single- and double-row connectors

orange	2773-500	50 (10)
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Self-adhesive marking strip; plain; 5 mm high;  
48 self-adhesive strips per card

white	210-334	1
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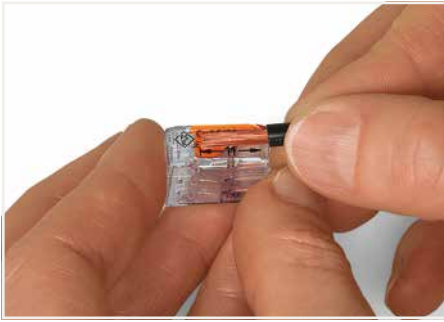




## COMPACT Splicing Connectors for All Conductor Types

### Description and Installation

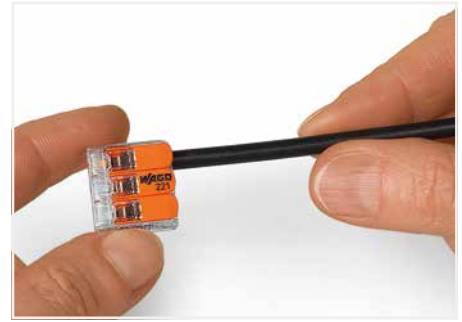
#### 221 Series



Stripping a conductor.



Termination: Lift the lever to open the clamping unit and insert a stripped conductor.



Then, lower the lever to close the clamp.



Wiring fine-stranded conductors in a junction box



Custom low-voltage lighting systems



Wiring fine-stranded conductors in a junction box



Lighting distribution in a ceiling canopy



Pendant light connection in a suspended ceiling

# COMPACT Splicing Connector for All Conductor Types

## 4 mm² / 6 mm²; 221 Series

### Technical Data

0.2 ... 4 mm² "s+str" 24 ... 12 AWG

0.14 ... 4 mm² "f-st"

450 V / 4 kV / 2 ①; I<sub>N</sub> 32 A

11 mm / 0.43 inch ②



### Technical Data

0.5 ... 6 mm²

450 V / 4 kV / 2 ①; I<sub>N</sub> 41 A

20 ... 10 AWG

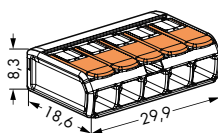
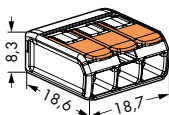
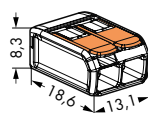
12 ... 14 mm / 0.47 ... 0.55 inch ②



COMPACT splicing connector for all conductor types; max. 4 mm²; with levers; Continuous operating temperature (max.): 105 °C; Surrounding air temperature: 85 °C

	Item No.	Pack. Unit
2-conductor	221-412	1000 (10x100)
3-conductor	221-413	500 (10x50)
5-conductor	221-415	250 (10x25)

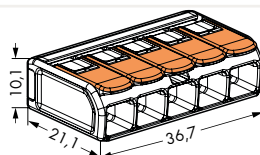
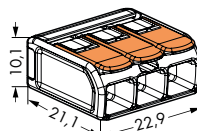
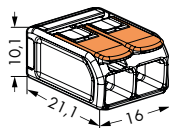
Dimensions in mm



COMPACT splicing connector for all conductor types; max. 6 mm²; with levers; Continuous operating temperature (max.): 105 °C; Surrounding air temperature: 85 °C

	Item No.	Pack. Unit
2-conductor	221-612	500 (10x50)
3-conductor	221-613	300 (10x30)
5-conductor	221-615	150 (10x15)

Dimensions in mm



### Item-Specific Accessories

Mounting carrier; for 2-, 3- and 5-wire connectors; carrier width: 17.5 mm



orange	221-500	50
dark gray/yellow	221-500/000-053	50
blue	221-500/000-006	50

Angled DIN-rail adapter; in combination with mounting carrier for DIN-35 rail mounting; Carrier width: 18.5 mm



gray	222-510	50
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Strain relief plate; for mounting carrier (221-500 and 222-505); 4 mm thick



orange	222-505	50
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Self-adhesive marking strip; plain; 5 mm high; 48 self-adhesive strips per card



white	210-334	1
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### Item-Specific Accessories

Mounting carrier; for 2-, 3- and 5-wire connectors; carrier width: 19.3 mm



orange	221-510	50
dark gray/yellow	221-510/000-053	50
blue	221-510/000-006	50

Angled DIN-rail adapter; in combination with mounting carrier for DIN-35 rail mounting; Carrier width: 18.5 mm



gray	222-510	50
------	---------	----

Strain relief plate; for mounting carrier (221-500 and 222-505); 4 mm thick



orange	222-505	50
--------	---------	----

Self-adhesive marking strip; plain; 5 mm high; 48 self-adhesive strips per card



white	210-334	1
-------	---------	---

### COMPACT Splicing Connectors; 4 mm²

They connect up to five stripped, fine-stranded conductors from 0.14 to 4 mm², as well as solid or stranded conductors from 0.2 to 4 mm² (24–12 AWG) – without tools!

### COMPACT Splicing Connectors; 6 mm²

Connect up to five stripped conductors from 0.5 to 6 mm² (20 ... 10 AWG) – without tools!

### How they work:

Pull up an orange lever to open the clamping unit.  
Then insert the conductor and push the lever back down, flush with the connector housing.

### Safety:

The lever's specially designed rest position reliably prevents accidental unclamping of a connected conductor.

Application safety, for any type of conductor (solid, stranded, fine-stranded), is confirmed by approvals like ENEC or UL.

ENEC is the European mark for electrical products that demonstrates compliance with European safety standards. The ENEC mark is subjected to the same EN standards as the VDE mark.

While the VDE mark is only permitted in Germany, the ENEC mark is accepted in more than 20 European countries.

① In grounded power lines

450 V = rated voltage  
4 kV = rated surge voltage  
2 = pollution degree

② Strip length, see packaging or instructions



Strain relief via cable ties on the mounting carrier (transverse to the connectors' wiring direction) – clamping units labeled via marking strips (210-334)



Vertical mounting with strain relief plate on DIN-35 rail



Horizontal mounting on DIN-35 rail using an angled DIN-rail adapter



## Mounting Carriers for Single Connectors

### Installation

### 221 Series



Inserting a connector into the mounting carrier.



Removing a connector from the mounting carrier.



Inserting a conductor.



Use a cable tie to secure the conductors to the strain relief plate.



Labeling



Testing a connector mounted on the carrier via test slot.

8



The strain relief plate can be removed.



Horizontal screw mounting



Vertical screw mounting



Horizontal mounting via snap-in foot



Vertical mounting via snap-in foot



Connecting a light to the mains.

# Mounting Carriers for Single Connectors

## 221 Series

for 2-wire connectors up to 4 mm²

for 3-wire connectors up to 4 mm²

for 5-wire connectors up to 4 mm²



For screw mounting; dimensions from the surface (mm)  
W x H x D: 18.1 x 16.9 x 52.8

Color	Item No.	Pack. Unit
○ white	221-502	50 (5x10)
● black	221-502/000-004	50 (5x10)

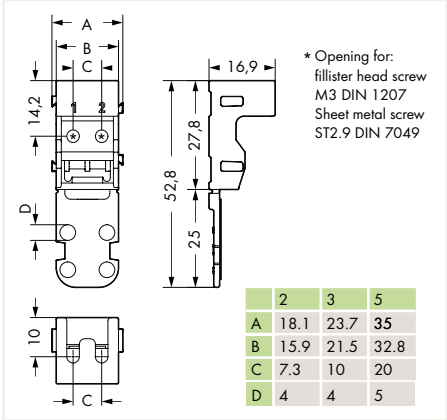
With snap-in mounting foot for horizontal mounting; dimensions from the surface (mm) W x H x D: 18.1 x 16.9 (+4.5 snap-in mounting foot)x 52.8

Color	Item No.	Pack. Unit
○ white	221-512	50 (5x10)
● black	221-512/000-004	50 (5x10)

With snap-in mounting foot for vertical mounting; dimensions from the surface (mm) W x H x D: 18.1 x 52.8 (+4.5 snap-in mounting foot)x 16.9

Color	Item No.	Pack. Unit
○ white	221-522	50 (5x10)
● black	221-522/000-004	50 (5x10)

Dimensions (in mm):



For screw mounting; dimensions from the surface (mm)  
W x H x D: 23.7 x 16.9 x 52.8

Color	Item No.	Pack. Unit
○ white	221-503	50 (5x10)
● black	221-503/000-004	50 (5x10)

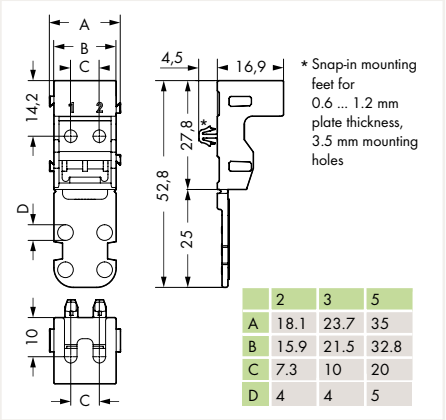
With snap-in mounting foot for horizontal mounting; dimensions from the surface (mm) W x H x D: 23.7 x 16.9 (+4.5 snap-in mounting foot)x 52.8

Color	Item No.	Pack. Unit
○ white	221-513	50 (5x10)
● black	221-513/000-004	50 (5x10)

With snap-in mounting foot for vertical mounting; dimensions from the surface (mm) W x H x D: 23.7 x 52.8 (+4.5 snap-in mounting foot)x 16.9

Color	Item No.	Pack. Unit
○ white	221-523	50 (5x10)
● black	221-523/000-004	50 (5x10)

Dimensions (in mm):



For screw mounting; dimensions from the surface (mm)  
W x H x D: 35 x 16.9 x 52.8

Color	Item No.	Pack. Unit
○ white	221-505	50 (5x10)
● black	221-505/000-004	50 (5x10)

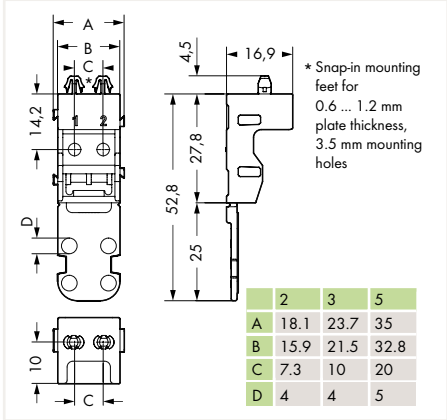
With snap-in mounting foot for horizontal mounting; dimensions from the surface (mm) W x H x D: 35 x 16.9 (+4.5 snap-in mounting foot)x 52.8

Color	Item No.	Pack. Unit
○ white	221-515	50 (5x10)
● black	221-515/000-004	50 (5x10)

With snap-in mounting foot for vertical mounting; dimensions from the surface (mm) W x H x D: 35 x 52.8 (+4.5 snap-in mounting foot)x 16.9

Color	Item No.	Pack. Unit
○ white	221-525	50 (5x10)
● black	221-525/000-004	50 (5x10)

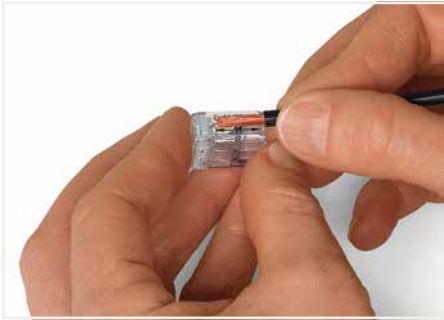
Dimensions (in mm):



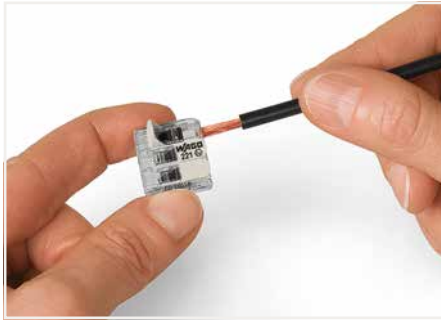
# COMPACT Splicing Connectors for All Conductor Types and Mounting Carrier for Ex Splicing Connectors; for Ex eb Applications; Description and Installation

## 221 Series

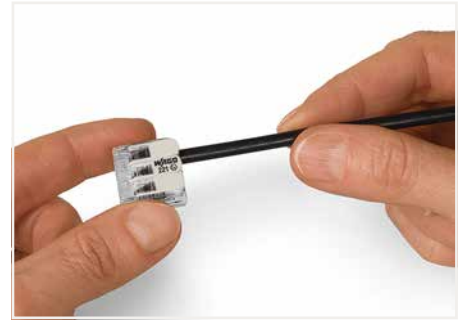
CAGE CLAMP®



Strip conductor to 11 mm (0.43 inch).



Termination: Lift the lever to open the clamping unit and insert a stripped conductor.



Then, lower the lever to close the clamp.



Inserting a connector into the mounting carrier.



Removing a connector from the mounting carrier.



Removing a conductor.

8



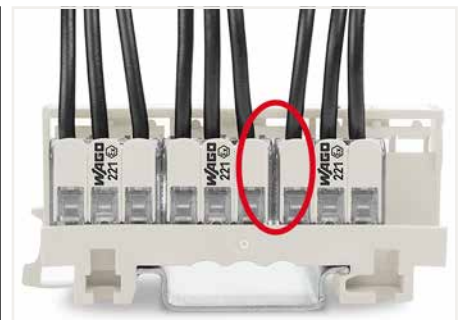
Mounting type (440 V)

A spacer integrated in the adapter can be seen between two connectors.

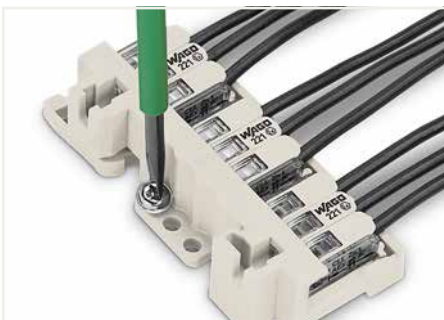


Mounting type (440 V)

Vertical mounting on DIN-35 rail



Mounting type (275 V)

A spacer integrated in the adapter **cannot** be seen between two connectors; the connector housings are close together.

Mounting type (440 V)

Horizontal screw mounting on a flat surface



Mounting type (440 V)

Mounting the carrier via non-conductive screws.



Mounting type (275 V)

Mounting the carrier using conductive screws.

# COMPACT Splicing Connector for All Conductor Types and Mounting Carrier; for Ex eb Applications 4 mm<sup>2</sup> / 6 mm<sup>2</sup>; 221 Series

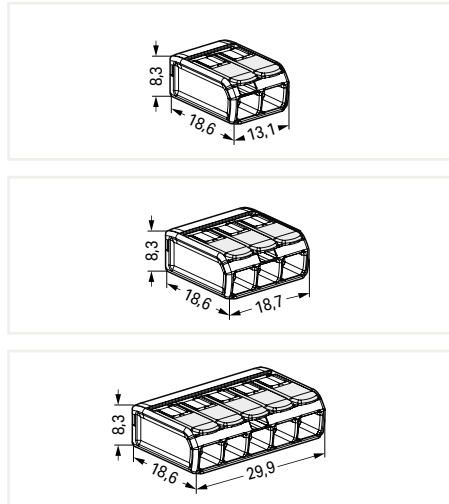
Technical Data	
IEC / EN 60079-7	UL 60079-7
Ⓔ IECEX Ex eb IIC Gb	Ⓔ Cl. I, Zn. 1, AEx eb IIC CNR Ex eb IIC U
0.2 ... 4 mm <sup>2</sup> "s+str"	24 ... 12 AWG "s+st"
0.14 ... 4 mm <sup>2</sup> "f-st"	24 ... 12 AWG "f-st"
440 V (275 V) ①	440 V (275 V), 20 A, ①
I <sub>N</sub> 24,5 A ① / I <sub>N</sub> 32 A ②	
Operating temperature: -55 ... +105 °C	
11 mm / 0.43 inch	



COMPACT splicing connector for all conductor types; for Ex eb applications; max. 4 mm<sup>2</sup>; with levers; Transparent housing; Light gray lever; Operating temperature (max.): 105 °C

	Item No.	Pack. Unit
2-conductor	221-482 ② ①	1000 (100)
3-conductor	221-483 ② ②	500 (50)
5-conductor	221-485 ② ②	250 (25)

Dimensions in mm



Item-Specific Accessories			
Mounting carrier; for 2-, 3- and 5-wire Ex splicing connectors (4 mm <sup>2</sup> ); 17.5 mm wide			
	light gray	221-501	50 (10)
	blue	221-500/000-006 ③	50 (10)

Self-adhesive marking strip; plain; 5 mm high; 48 self-adhesive strips per card			
	white	210-334	1

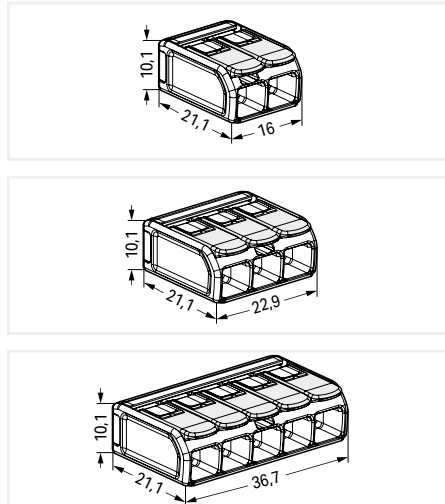
Technical Data	
IEC / EN 60079-7	UL 60079-7
Ⓔ IECEX Ex eb IIC Gb	Ⓔ Cl. I, Zn. 1, AEx eb IIC CNR Ex eb IIC U
0.5 ... 6 mm <sup>2</sup>	20 ... 10 AWG
440 V (275 V) ①	440 V (275 V), 20 A, ①
I <sub>N</sub> 37 A	
Operating temperature: -55 ... +105 °C	
12 ... 14 mm / 0.47 ... 0.55 inch	



COMPACT splicing connectors for all conductor types; for Ex eb applications; max. 6 mm<sup>2</sup>; with levers; Transparent housing; Light gray lever; Operating temperature (max.): 105 °C

	Item No.	Pack. Unit
2-conductor	221-682 ②	500 (50)
3-conductor	221-683 ②	300 (30)
5-conductor	221-685 ②	150 (15)

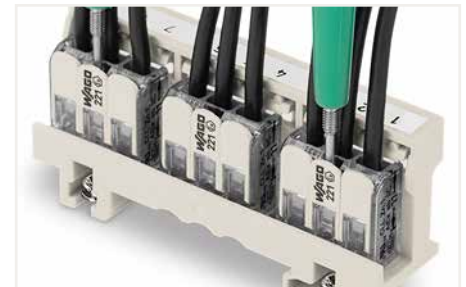
Dimensions in mm



Item-Specific Accessories			
Mounting carrier; for 2-, 3- and 5-wire Ex splicing connectors (6 mm <sup>2</sup> ); 19.3 mm wide			
	light gray	221-511	50 (10)
	blue	221-510/000-006 ③	50 (10)

Self-adhesive marking strip; plain; 5 mm high; 48 self-adhesive strips per card			
	white	210-334	1

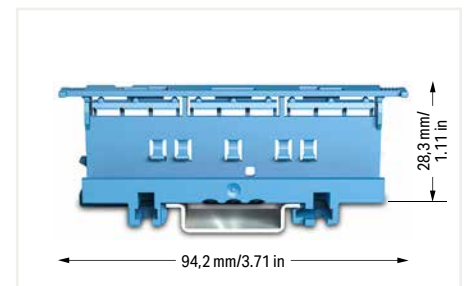
- The permissible operating voltage of the connector with carrier (440 V or 275 V) depends on the mounting type.  
The mounting types for both 440 V and 275 V are shown on the "Description and Installation" page. If a mounting type for 275 V is used, this is the permissible working voltage.
  - Only approved in conjunction with a mounting carrier (221-511). Other carriers are possible, see certificate (UL).  
The connectors must be installed in an enclosure meeting the requirements of a recognized protection type per EN 60079-0, Section 1 or EN 60079-31. When installing the connectors in an enclosure of protection type "eb" (increased safety) per EN 60079-7, the clearances and creepage distances of Table 2 for this standard must be observed (for the use of accessories see point 1).  
The connectors can be used both in Group II and Group I, as the standard requirements are identical in this case.  
The use of these components requires a new assessment by an authorized certification agency.
  - Carriers with a blue insulated housing are suitable for Ex i applications. Both clearances and creepage distances for the protection type "intrinsic safety Ex i" must be observed.
- » Approvals and corresponding ratings, visit [www.wago.com](http://www.wago.com)



Easily test inserted connectors in the carrier – however they are mounted.



Wiring example in an Ex e junction box  
Labeling is performed via marking strips (210-334) and pen or continuous labels (210-834), which is printed via Smart Printer (258-5000).



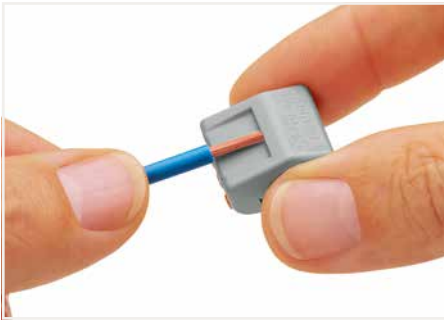
Carriers with a blue insulated housing are suitable for Ex i applications. Both clearances and creepage distances for the protection type "intrinsic safety Ex i" must be observed.



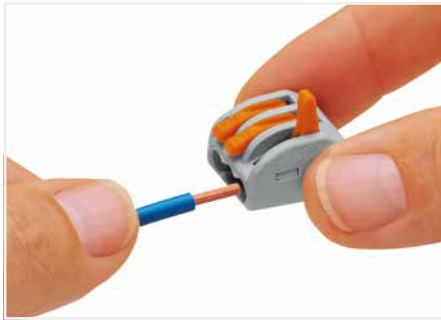
## Splicing Connectors for All Conductor Types

### Description and Installation

#### 222 Series



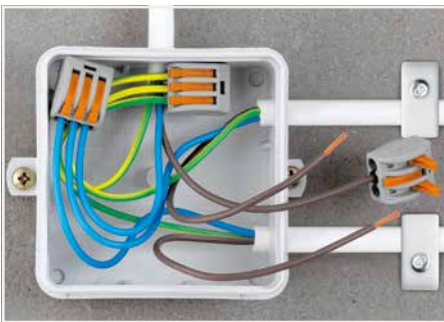
Strip conductor to 9 ... 10 mm (0.35 ... 0.39 inch).



Termination: Lift the lever to open the clamping unit and insert a stripped conductor.



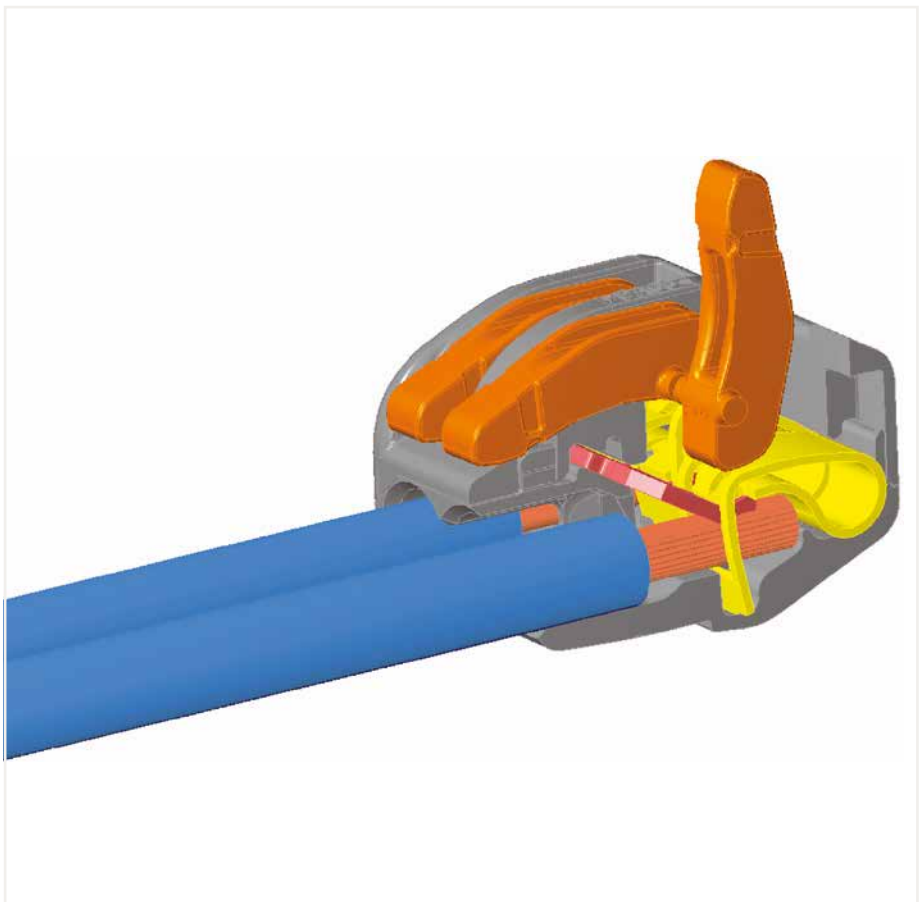
Then, lower the lever to close the clamp.



Wiring fine-stranded conductors in a junction box.



Testing the wired connectors



## Compact Splicing Connector for All Conductor Types 222 Series

### Technical Data

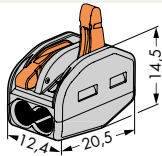
2 x 0.08 ... 2.5 mm <sup>2</sup> "s+st"	28 ... 12 AWG "s+st"
2 x 0.08 ... 4 mm <sup>2</sup> "f-st"	28 ... 12 AWG "f-st"
400 V / 4 kV / 2 ①; I <sub>N</sub> 32 A	600 V; 20 A; ②
9 ... 10 mm / 0.35 ... 0.39 inch	



Splicing connector; 2-wire connector; with levers;  
continuous operating temperature (max.): 85°C; ambient  
temperature (max.): 40°C

Color	Item No.	Pack. Unit
gray	222-412	500

Dimensions (in mm):



### Technical Data

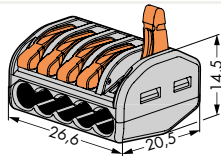
5 x 0.08 ... 2.5 mm <sup>2</sup> "s+st"	28 ... 12 AWG "s+st"
5 x 0.08 ... 4 mm <sup>2</sup> "f-st"	28 ... 12 AWG "f-st"
400 V / 4 kV / 2 ①; I <sub>N</sub> 32 A	600 V; 20 A; ②
9 ... 10 mm / 0.37 inch	



Splicing connector; 5-wire connector; with levers;  
continuous operating temperature (max.): 85°C; ambient  
temperature (max.): 40°C

Color	Item No.	Pack. Unit
gray	222-415	400

Dimensions (in mm):



### Technical Data

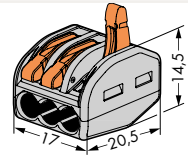
3 x 0.08 ... 2.5 mm <sup>2</sup> "s+st"	28 ... 12 AWG "s+st"
3 x 0.08 ... 4 mm <sup>2</sup> "f-st"	28 ... 12 AWG "f-st"
400 V / 4 kV / 2 ①; I <sub>N</sub> 32 A	600 V; 20 A; ②
9 ... 10 mm / 0.35 ... 0.39 inch	



Splicing connector; 3-wire connector; with levers;  
continuous operating temperature (max.): 85°C; ambient  
temperature (max.): 40°C

Color	Item No.	Pack. Unit
gray	222-413	500

Dimensions (in mm):



Strain relief via cable ties on the mounting carrier (per-  
pendicular to the connectors' wiring direction); molded  
marking clamping units



Mounting carrier with strain relief plate mounted vertically  
on a plate; round cable secured via strain relief lug

### CLASSIC Splicing Connectors

They connect up to five stripped, fine-stranded  
conductors from 0.08 to 4 mm<sup>2</sup> (28–12 AWG), as well  
as solid or stranded conductors from up to 2.5 mm<sup>2</sup>  
(12 AWG) – without tools!

#### How these work:

Pull up one of the orange operating levers to open the  
clamping unit so that the lever engages and keeps  
the clamp in its opened position. Then insert the  
conductor and push the lever back down, flush with  
the connector housing.

#### Safety:

The specially designed rest position of the lever reli-  
ably prevents accidental unclamping of a connected  
conductor.

Application safety, for any type of conductor (solid,  
stranded, fine-stranded), is confirmed by approvals  
like ENEC or UL.

» ENEC is the European mark for electrical products  
that demonstrates compliance with European safety  
standards. The ENEC mark is subjected to the same  
EN standards as the VDE mark.  
While the VDE mark is only permitted in Germany, the  
ENEC mark is accepted in more than 20 European  
countries.

① In grounded power lines

400 V = rated voltage

» 4 kV = rated surge voltage  
2 = pollution degree

### Accessories

Mounting carrier; for 2-, 3- and 5-wire connectors; carrier  
width: 22 mm

orange	222-500	50
--------	---------	----

Strain relief plate; for mounting carrier (221-500 and  
222-505); 4 mm thick

orange	222-505	50
--------	---------	----

Angled DIN-rail adapter; in combination with mounting  
carrier for DIN-35 rail mounting; carrier width: 18.5 mm

gray	222-510	50
------	---------	----

Self-adhesive marking strip; plain; 5 mm high; 48 self-ad-  
hesive strips per card

white	210-334	1
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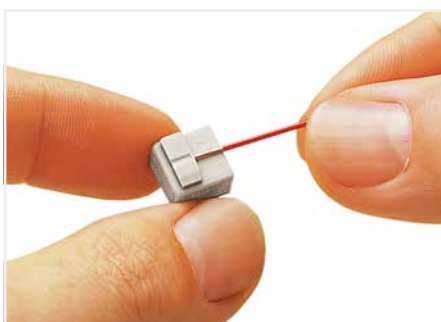
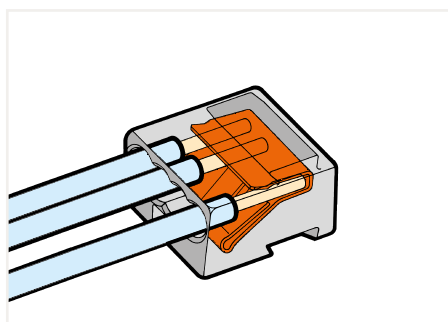
Horizontal mounting with strain relief plate on DIN-35 rail  
using an angled DIN-rail adapter



# MICRO PUSH WIRE® Connectors for Junction Boxes and Solid Conductors

## Description and Installation

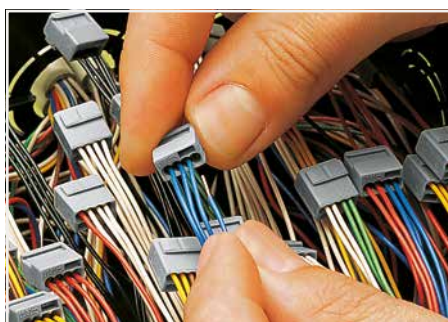
### 243 Series



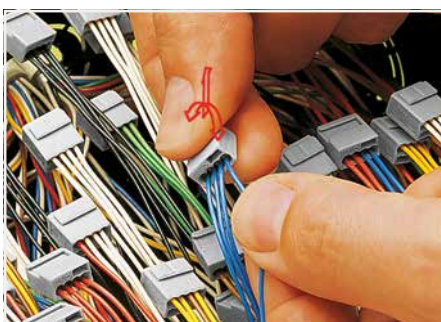
Strip solid conductors to 5 ... 6 mm (0.19 ... 0.23 inch).



**Connector strips:**  
Assembling modular connectors into connector strips.



**Termination:** Insert stripped conductor until it hits back-stop.



**Removal:** Hold conductor to be removed and twist alternately left and right while pulling the connector.



Power supply

8



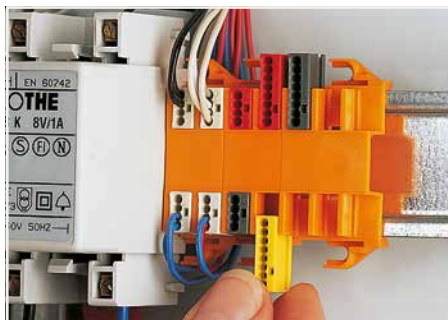
Testing



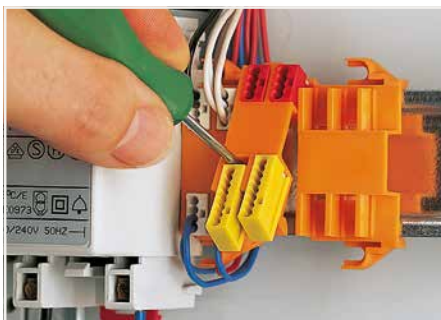
Commoned connector strips



Switch interface



Inserting a MICRO junction box connector into the mounting carrier.



Removing a mounting carrier from the assembly.

## MICRO PUSH WIRE® Connector for Junction Boxes 243 Series



### Technical Data

Ø 0.6 ... 0.8 mm "s"	22 ... 20 AWG "s"
100 V / 1.5 kV / 2; I <sub>N</sub> 6 A	150 V; 7 A;

5 ... 6 mm / 0.2 ... 24 inch



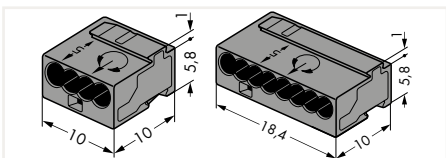
4-wire connector; continuous operating temperature (max.): 150°C; ambient temperature (max.): 60°C

Color	Item No.	Pack. Unit
● dark gray	243-204	1000 (10x100)
● red	243-804	1000 (10x100)
○ light gray	243-304	1000 (10x100)
● yellow	243-504	1000 (10x100)

8-wire connector; continuous operating temperature (max.): 150°C; ambient temperature (max.): 60°C

Color	Item No.	Pack. Unit
● dark gray	243-208	500 (10x50)
● red	243-808	500 (10x50)
○ light gray	243-308	500 (10x50)
● yellow	243-508	500 (10x50)

Dimensions (in mm):



### Technical Data

Ø 0.4 ... 0.5 mm "s"	26 ... 24 AWG "s"
100 V / 1.5 kV / 2; I <sub>N</sub> 6 A	

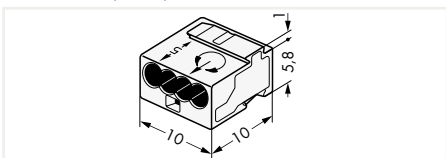
5 ... 6 mm / 0.2 ... 24 inch



4-wire connector; continuous operating temperature (max.): 150°C; ambient temperature (max.): 60°C

Color	Item No.	Pack. Unit
○ transparent	243-144	1000 (10x100)

Dimensions (in mm):



### Technical Data

4 x Ø 0.6 ... 0.8 mm² "s"	
100 V ≈ I <sub>N</sub> 6 A	

5 ... 6 mm / 0.2 ... 24 inch



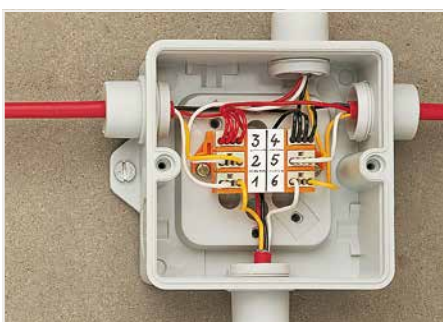
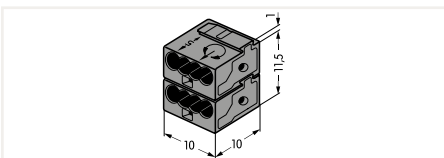
Connector strip; continuous operating temperature (max.): 150°C; ambient temperature (max.): 60°C

Color	Item No.	Pack. Unit
● dark gray	243-211	500 (10x50)
● assembled with red connector		

Additional version equipped with the same dovetail joints

Color	Item No.	Pack. Unit
○ light gray	243-212	500 (10x50)
● assembled with yellow connector		

Dimensions (in mm):



Typical application in a terminal box for burglar alarm - screw mount



DIN-35 rail-mount application (residential door bell)

WAGO's 243 Series MICRO PUSH WIRE® Connectors for junction boxes can be used in both communication and alarm systems according to the VdS (German Association of Property Insurers) guidelines.

No general approval is given to PUSH WIRE® connectors by the VdS association. The connectors must be tested together with the different parts of the system.

- » The requirements for connectors are specified in the VdS guidelines for junction boxes (VdS 2116) in section 9.8: "The junction box connectors must be designed to guarantee a reliable and stable connection."

The verification of the fulfillment of these requirements is documented in the VDE test report No. 2574-1440-4031 for the insulated 243 Series PUSH WIRE® Connectors for junction boxes.

- ① In grounded power lines  
100 V = rated voltage  
1.5 kV = rated surge voltage  
2 = pollution degree

### Accessories

Mounting carrier; for 4- and 8-wire connectors (243 Series)

	orange, 4 connectors	243-112	50
	orange, 4 connectors	243-113	50

Marking strip; 3 strips per card

	243-110	1
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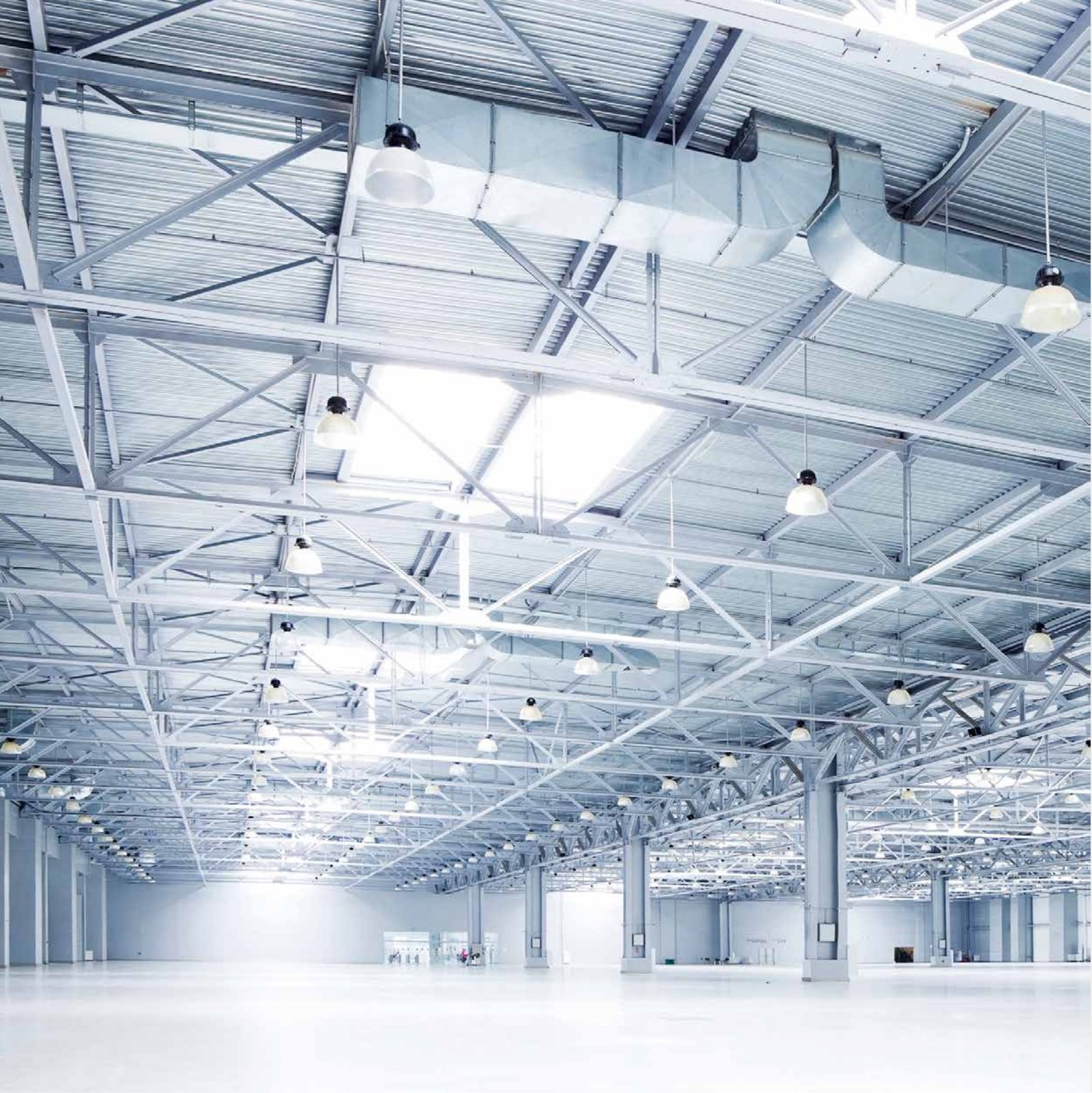
Felt-tip pen

	210-110	1
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Example of a residential intercom application



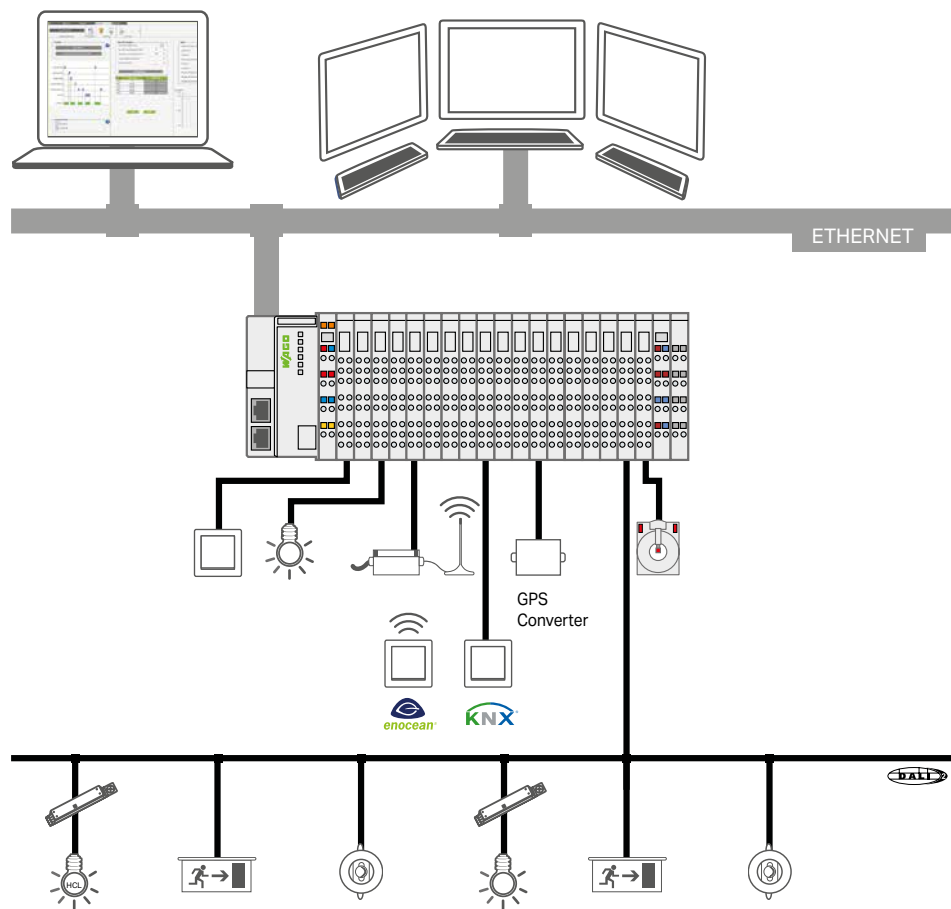


# WAGO Lighting Management

WAGO Lighting Management

	Page
Component Overview	256

## WAGO Lighting Management



9

WAGO Lighting Management is a proven concept based on predefined hardware and preconfigured software, which greatly simplifies planning, commissioning and operation. The basic idea: WAGO Lighting Management is based on the different lighting requirements in warehouses and production facilities.

For example, a production facility is divided into virtual rooms in which the light can be flexibly adapted. Each virtual room receives signals from sensors and actuators in order to automatically set the appropriate light intensity. By using the virtual rooms, conversions and room remodeling can be implemented quickly and simply via Web configuration. A separate HTML5 user interface is available for convenient and clear operation of WAGO Lighting Management. Operation is optimized for display on different end devices, such as tablets, smartphones and touch panels.



For more information, visit [www.wago.com](http://www.wago.com)



# WAGO Lighting Management










WAGO Lighting Management			
Components		Item No.	Note
Base Unit	PFC200 Controller; 2nd generation; 2 x ETHERNET, RS-232/-485	750-8212	The PFC200 Controller is a compact PLC for the modular WAGO I/O System. Besides network and fieldbus interfaces, the controller supports all analog/digital input/output modules and specialty modules found within the 750/753 Series. The controllers can communicate with each other.
	License for application "Lighting Management"	2759-204/261-1000	Application available via <a href="http://www.wago.com">www.wago.com</a>
	DALI Multi-Master	753-647	In addition to 64 DALI actuators (ECGs), a DALI-Multi Master supports up to 16 DALI-Multi sensors (max. 64 sensor addresses); max. 10 DALI modules per base package.
	End Module	750-600	An end module must be snapped onto the assembly at the end of a fieldbus node.
	Power Supply to I/O Node	787-1012	24 VDC supply voltage for controllers and additional modules
	Power Supply to DALI Multi-Master	787-1007	Power supply to max. 5 DALI Multi-Master Modules
Extension for visualization		2759-2101/271-1000	Visualization – S
	License for visualization	2759-2102/271-1000	Visualization – M
		2759-2103/271-1000	Visualization – L
Extension for inputs/buttons	16-Channel Digital Input; 24 VDC; 3 ms	750-1405	For 1–16 light push-buttons/switch inputs; max. 4 extensions per base package
Extension for outputs/actuators	16-Channel Digital Output; 24 VDC; 0.5 A	750-1504	For 1–16 actuators/lamps/relays/ECG control; max. 2 extensions per base package
	Relay socket with relay and status indicator; 1 make contact; 24 VDC	788-357	Light switching via relay
Extension for EnOcean Radio	RS-232/-485 Serial Interface	750-652	Serial interface connects to STC65-RS-485 EVC EnOcean Radio Transmitter/Receiver (for 1-64 rocker switches)
	EnOcean Receiver/Transmitter	2852-7101	EnOcean radio signal recording and transmission to the I/O node
	EnOcean Repeater	2852-7102	Extends the transmission range (for more planning information, visit the EnOcean website)
	EnOcean easyfit PTM 250 Radio Transmitter; 2-channel lighting control	758-940/001-000	1-2 or 1-4 signals; range of 30 meters in buildings to the radio receiver
	EnOcean easyfit PTM 250 Radio Transmitter; 4-channel lighting control	758-940/003-000	1-2 or 1-4 signals; range of 30 meters in buildings to the radio receiver
Extension for external time request	Real-Time Clock Module	750-640	Time synchronization module, if no time server connection is possible
	GPS DCF Converter	2852-7901	Converter/external receiver for time synchronization
Extension for Energy Data Measurement	3-Phase Power Measurement; 690 VAC	750-495/xxx-xxx	
	Current and Voltage Connections	2007-8874; 2007-8877	Pre-assembled terminal block assemblies for easy connection and short-circuiting of current transformers (for current transformers, see Full Line Catalog, Volume 4)
Extension for KNX buttons	KNX/EIB/TP1 interface	753-646	Connects KNX push-buttons to the I/O node; max. 1 module per base package
DALI-2 Sensors	DALI Sensor; PD11-BMS-FLAT	2852-7210	LOW BAY Sensor for offices (2 ... 5 m)
	DALI Sensor; PD4-BMS-GH	2852-7213	HIGH BAY Sensor for warehouses (5 ... 16 m)
	DALI Sensor; PD4N-BMS	2852-7214	MID BAY Sensor for open-plan offices, underground garages, entrance halls, production facilities (2 ... 10 m)
	Adapter; AP Assembly Kit IP54; Accessories for 2852-7214	2852-7215	Accessories for surface mounting of the PD4N-BMS (B.E.G.)
	DALI Sensor; MSensor G3 SRC 30 PIR 5DPI WH	2852-7220	LOW BAY Sensor for offices (up to 5 m)
	DALI Sensor; MSensor G3 SSM 30 10DPI WH	2852-7221	MID BAY Sensor for high-ceiling rooms, e.g., production facilities, underground garages (Installation height: 5 ... 10 m)
	DALI Sensor; IR Quattro HD DALI-2	2852-7230	LOW/MID BAY Sensor for offices (2.5 ... 10 m)
	DALI Sensor; IR Quattro SLIM XS DALI-2	2852-7231	LOW BAY Sensor for offices, slim design (2.5 ... 4 m)
	DALI Sensor; IS3360 MX HIGH BAY DALI-2	2852-7232	HIGH BAY Sensor for industrial buildings, circular detection range (4 ... 14 m)
	DALI Sensor; IS345 MX HIGH BAY DALI-2	2852-7233	HIGH BAY Sensor for industrial buildings, rectangular detection range (4 ... 14 m)
	DALI XC G3 (DALI-2)	2852-7225	Push-button coupler connects 4 conventional push-buttons to DALI.
	DALI Multi-Sensor kit	2851-8201	Brightness measurement and motion sensor: Kit connects to a DALI bus system.
DALI Sensors	DALI Sensor Coupler	2851-8202	Sensor coupler for connecting MULTI-3-CI sensors to DALI Max. 16 DALI sensor couplers per DALI Multi Master Module (753-647)
	DALI HIGHBAY ADAPTER + HIGH BAY	2852-7207; 2852-7201	Brightness measurement and motion sensor for large installation heights (3-13 m)
	DALI HIGHBAY ADAPTER + VISION	2852-7207; 2852-7202	Motion sensor for large areas, open offices, hallways or warehouses
	DALI LS/PD LI	2852-7203	Motion sensor for office lighting (1-5 m)
	DALI Sensor Coupler HF LS LI	2852-7205	
	Radar Sensor HF LS LI	2852-7206	Light and recessed ceiling sensor: combined daylight and motion detection; motion detection via radar
	4p4c Connection Cable; 50 cm	2852-7208	
	DALI XC	2852-7301	Push-button coupler connects 4 conventional push-buttons to DALI.
	DALI Sensor Coupler E	2852-7204	Sensor coupler connects standard sensors to DALI.





## WAGO Accessories and Tools

WAGO Accessories and Tools

			Page
	Operating Tools	206 Series	260
		209 Series	
		210 Series	
		233 Series	
		236 Series	
		2059 Series	
		2060 Series	
		2061 Series	
	WINSTA® Operating Tools	770 Series	264
		890 Series	
	Disconnection Tools	206 Series	265
	Cable Strippers	206 Series	266
	Stripping Tools	206 Series	269
	Crimping Tools	206 Series	270
	Ferrules	216 Series	271
	Test and Measurement Devices	206 Series	272
		210 Series	
		735 Series	
	"Alu-Plus" Contact Paste	249 Series	273

## Operating Tool 210 Series



Operating tool; type 1; (2.5 x 0.4) mm blade; with partially insulated shaft

Item No.	Pack. Unit
210-719	50 (1)

Operating tool set  
(210-719, 210-720, 210-721)

Item No.	Pack. Unit
210-722	1

Operating tool; type 1; short; (2.5 x 0.4) mm straight blade; with a partially insulated shaft

Item No.	Pack. Unit
210-647	50 (1)

Operating tool; type 2; (3.5 x 0.5) mm blade; with partially insulated shaft

Item No.	Pack. Unit
210-720	50 (1)

Operating tool; type 2; short; (3.5 x 0.5) mm straight blade; with a partially insulated shaft

Item No.	Pack. Unit
210-657	50 (1)

Operating tool; type 3; (5.5 x 0.8) mm blade; with partially insulated shaft

Item No.	Pack. Unit
210-721	25 (1)

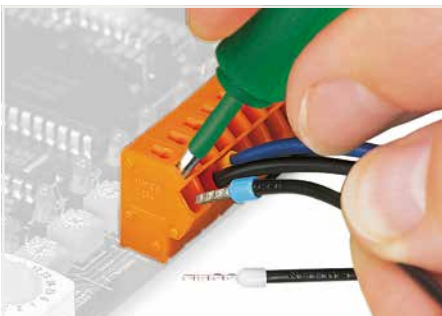
Operating tool; type 1; short; (2.5 x 0.4) mm angled blade; with a partially insulated shaft

Item No.	Pack. Unit
210-648	50 (1)

Operating tool; type 2; short; (3.5 x 0.5) mm angled blade; with a partially insulated shaft

Item No.	Pack. Unit
210-658	50 (1)

10



The blade dimensions of the above-listed operating tools are ideal for operating both PCB terminal blocks and MCS connectors.



The above-listed operating tools with blade dimensions per DIN 5624 are ideal for operating PCB terminal blocks.

Operating Tool  
233, 236, 206 Series



Operating tool; for factory wiring of PCB terminal strips; metal, partially insulated		
Color	Item No.	Pack. Unit
● green	233-335	50



Operating tool; for factory wiring of PCB terminal strips; insulated		
	Item No.	Pack. Unit
	236-332	400

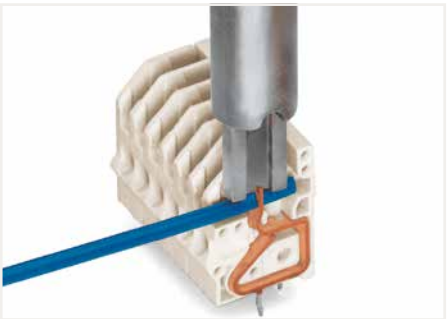
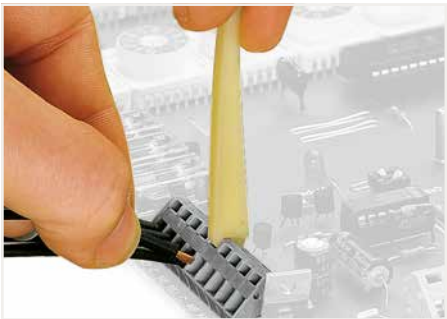


Operating tool; suitable for IDC termination of 251 Series		
	Item No.	Pack. Unit
	206-831	25

Operating tool; for factory wiring of PCB terminal strips; insulated		
Color	Item No.	Pack. Unit
natural	233-332	500

Operating tool; for factory wiring of PCB terminal strips; metal		
	Item No.	Pack. Unit
	236-335	500

Operating tool; for factory wiring of PCB terminal strips; insulated		
Color	Item No.	Pack. Unit
● yellow	233-331	500



Compared to standard screwdrivers, these operating tools are far more convenient for wiring PCB terminal strips at factory.

## Operating Tool

### 209, 280, 206 Series



Operating tool; insulated; 5/5.08 mm pin spacing; operation parallel to conductor entry; for male and female connectors with CAGE CLAMP® connection

	Item No.	Pack. Unit
1-way	209-130	100
2-way	280-432	100
3-way	280-433	100
4-way	280-434	40
5-way	280-435	40
6-way	280-436	40
7-way	280-437	40
8-way	280-438	30
9-way	280-439	30
10-way	280-440	30



Operating tool; insulated; 5/5.08 mm pin spacing; operation perpendicular to conductor entry; for male and female connectors with CAGE CLAMP® connection

	Item No.	Pack. Unit
2-way	209-132	40



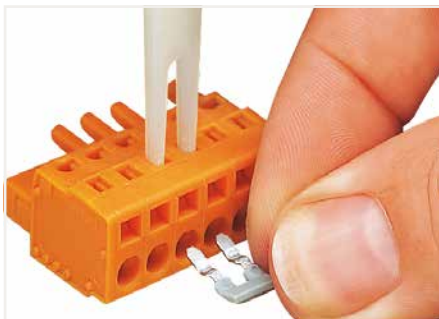
Operating tool; for 2080 Series terminal strips

	Item No.	Pack. Unit
	206-880	3

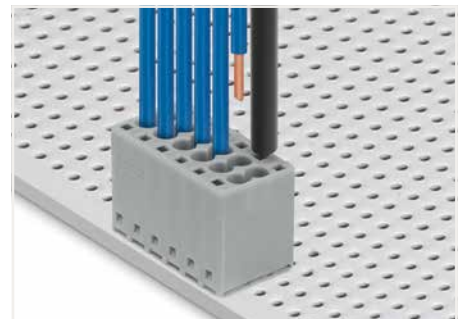
10



Inserting a male connector with long contact pins into a front-entry rail-mount terminal block via 6-pole operating tool.



Commoning a female connector with comb-style jumper bar (231-902) via 2-pole operating tool.



Removing conductor (2080 Series) via push-button and 1 mm Ø operating tool.

Operating Tool

206, 2059, 2060, 2061; 2065; 2070 Series



Operating tool; for 2059 Series PCB Terminal Blocks		
	Item No.	Pack. Unit
	206-859	5



Operating tool; for 2059 Series PCB Terminal Blocks; insulated		
	Item No.	Pack. Unit
	2059-189	600



Operating tool; for 2065 Series PCB Terminal Blocks; insulated		
	Item No.	Pack. Unit
	2065-189	600

Operating tool; for 2060 Series PCB Terminal Blocks		
	Item No.	Pack. Unit
	206-860	5

Operating tool; for 2060 Series PCB Terminal Blocks; insulated		
	Item No.	Pack. Unit
	2060-189	300

Operating tool; for 2061 Series PCB Terminal Blocks		
	Item No.	Pack. Unit
	206-861	5

Operating tool; for 2061 Series PCB Terminal Blocks; insulated		
	Item No.	Pack. Unit
	2061-189	300



Operating tool; for 2070 Series PCB Terminal Blocks; insulated		
	Item No.	Pack. Unit
	2070-400	100



Inserting/removing fine-stranded conductors by lightly pressing on a push-button.



# WINSTA® Operating Tool

## 890, 770 Series



Operating tool; 2-pole; for WINSTA® MINI Connectors		
Color	Item No.	Pack. Unit
● green	890-382	1



Operating tool; 3-pole; for WINSTA® MINI Connectors		
Color	Item No.	Pack. Unit
● green	890-383	1



Operating tool; 4-pole; for WINSTA® MINI Connectors		
Color	Item No.	Pack. Unit
● green	890-384	1



Operating tool; 5-pole; for WINSTA® MINI Connectors		
Color	Item No.	Pack. Unit
● green	890-385	1



Operating tool; 2-pole; for WINSTA® MIDI Connectors		
Color	Item No.	Pack. Unit
● green	770-382	1



Operating tool; 3-pole; for WINSTA® MIDI Connectors		
Color	Item No.	Pack. Unit
● green	770-383	1

# Disconnection Tool

## 206 Series



Disconnection tool; with two replacement blades in the handle; removes conductors from 251 Series PUSH WIRE® connections		
	Item No.	Pack. Unit
	206-830	50



Disconnection tool; removes conductors from 744 Series PUSH WIRE® connections		
	Item No.	Pack. Unit
	206-841	50



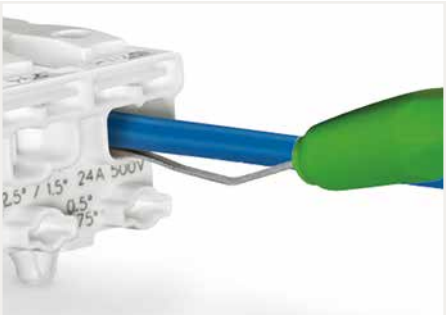
Disconnection tool; removes conductors from 294 Series PUSH WIRE® connections		
	Item No.	Pack. Unit
	206-294	1



Conductor removal – PUSH WIRE®: Fully insert disconnection tool over the conductor and pull it out.



Remove the conductor by inserting a disconnection tool into the operating slot and pull it out.



Conductor removal: Slide disconnection tool beneath the conductor and pull conductor out.



Disconnection tool includes two replacement blades in the handle.

Cable Stripper



Cable knife; for Ø 8 ... 28 mm / 0.31 ... 1.10 inch; with a unique, changeable cable bracket system; including cable bracket

	Item No.	Pack. Unit
	206-1403	1

Item-Specific Accessories		
Cable bracket; for Ø 4 ... 16 mm / 0.16 ... 0.63 inch		
	206-1411	1

Cable bracket; for Ø 8 ... 28 mm / 0.31 ... 1.10 inch		
	206-1412	1

Cable bracket; for Ø 27 ... 35 mm / 1.06 ... 1.38 inch		
	206-1413	1

Cable bracket; for Ø 35 ... 50 mm / 1.38 ... 1.97 inch		
	206-1414	1

Cable bracket; for Ø 50 ... 70 mm / 1.97 ... 2.75 inch		
	206-1415	1

Accessories		
Spare inside blade	206-1418	3
Spare hook blade	206-1419	1



Cable knife set; for Ø 4 ... 70 mm / 0.16 ... 2.75 inch; including all cable brackets in a Sortimo® Box

	Item No.	Pack. Unit
	206-1400	1

Never use this tool on or near live electrical circuits!



To replace the cable bracket, use the new bracket as an operating tool and pull it upwards.



The cutting depth of the hook blade can be adjusted with the slider.



The cutting depth of the inner knife can be adjusted with the screw.



Strip large cross sections with the hook blade.



Release the fuse before using the hook blade.

Cable Stripper



In-socket cable stripper; for Ø 8 ... 13 mm / 5/16 ... 1/2 inch		
	Item No.	Pack. Unit
	206-1441	1



Universal cable stripper; for Ø 8 ... 13 mm / 5/16 ... 1/2 inch		
	Item No.	Pack. Unit
	206-1442	1



Data cable stripper; for Ø 4.5 ... 10 mm / 3/16 ... 3/8 inch		
	Item No.	Pack. Unit
	206-1451	1



- Product features:
- Extra long design and improved force transmission simplifies stripping in deep device connection sockets
  - Special four-blade design for an even more precise round cut
  - No cutting depth adjustment required
  - TiN-coated blades, TÜV/GS tested
  - Ø 8 ... 13 mm / 5/16 ... 1/2 inch
  - Strips all standard round cables, including NYM 3 x 1.5 mm²/16 AWG ... 5 x 2.5 mm²/14 AWG



- Sheath stripping: longitudinal cut
- Product features:
- Secure grip achieved with soft padding for non-slip grips
  - Technically improved functionality
  - New locking mechanism prevents the unwanted opening of the tool
  - Absolutely straightforward, quick and easy longitudinal cuts – with innovative internal cable duct
  - Redesigned blade layout and intake to stop cable waste from jamming the tool
  - Durable and ergonomically designed pocket clip
  - Ø 8 ... 13 mm / 5/16 ... 1/2 inch



- Product features:
- Strip outer insulation and foil sheathing with one tool
  - Ideal for stripping PVC-insulated data cables with thin insulation (e.g., Cat. 5, Cat. 6, Cat. 7, twisted pair cable)
  - TiN-coated blades
  - Ø 4.5 ... 10 mm / 3/16 ... 3/8 inch



Stripping a cable sheath.



Built-in handy knife



Stripping a wire insulation.



Cable Stripper



Never use this tool on or near live electrical circuits!

The stripping pliers for sensor cables have a blade geometry specially designed for sensor cables with a smaller cross section and a working range from Ø 3.2 mm / 0.13 inch (for stranded cables and round cables with Ø 3.2 mm ... 4.4 mm / 0.13 ... 0.17 inch).

The stripping pliers for control cables are designed for stronger cables from Ø 4.4 mm / 0.17 inch (for stranded cables and round cables with Ø 4.4 mm ... 7 mm / 0.17 ... 0.27 inch).

These stripping pliers quickly and safely strip cables for connecting, e.g., sensor/actuator distribution boxes, bus couplers and pluggable connectors.

- Suitable for:
- Halogen-free PUR sensor/actuator cables
  - Highly flexible TPE-U cables
  - Control cables
  - PUR cables
  - PUR/PVC cables
  - PVC cables
  - Multi-core cables
  - Shielded and unshielded cables

Stripping pliers; for sensor cables; for Ø 3.2 ... 4.4 mm / 0.13 ... 0.17 inch		
	Item No.	Pack. Unit
	206-1481	1

Item-Specific Accessories		
Replacement blade set; for Ø 3.2 ... 4.4 mm / 0.13 ... 0.17 inch		
	206-1491	1

Stripping pliers; for control cables; for Ø 4.4 ... 7 mm / 0.17 ... 0.27 inch		
	Item No.	Pack. Unit
	206-1482	1

Item-Specific Accessories		
Replacement blade set; for Ø 4.4 ... 7 mm / 0.17 ... 0.27 inch		
	206-1492	1



Wire Stripper



Wire stripper "Quickstrip Vario"; 0.03 ... 16 mm² / 34 ... 6 AWG; with wire cutter

	Item No.	Pack. Unit
	206-1125	1

Accessories

Blade set; Standard; 0.03 ... 16 mm² / 34 ... 6 AWG		
	206-1126	1

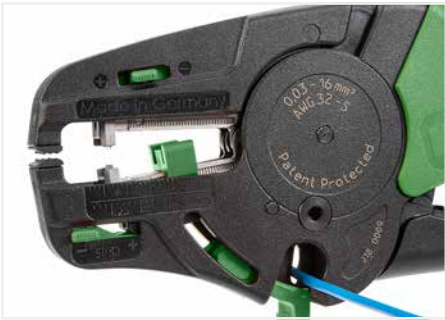
Blade set; V-blade; 0.14 ... 4 mm² / 24 ... 12 AWG		
	206-1127	1

Blade set; Oval blade; 10 ... 16 mm² / 8 ... 6 AWG		
	206-1128	1

Spare stripping stop		
	206-1129	1

Spare cut protector		
	206-1131	1

Spare clamping jaws		
	206-1132	1



Cutting a conductor.



Partially stripping a conductor.

- Wire Stripper:
- Automatically adjust to conductor size
  - Stripping blades cause no damage to conductor strands
  - Gripping pressure of jaws adjusts automatically to conductor insulation diameter
  - Clamping jaws and stripping blades automatically open once the stripping process is completed – no splaying of the conductor strands
  - Exact strip length may be set by sliding black setting stop
  - Stripping blades can be replaced
  - Self-sharpening, fully protected cutter (replaceable)
  - Entire body made of glass-fiber-reinforced polyamide
  - Cutting capacity of the wire cutter of fine-stranded conductors up to 16 mm² (6 AWG)



## Crimping Tool



Crimping tool "Variocrimp 4"; for insulated and uninsulated ferrules; Crimping range: 0.25 ... 4 mm<sup>2</sup> (24 ... 12 AWG)

	Item No.	Pack. Unit
	206-1204	1

Spring clamp; large

	206-1205	1
--	----------	---

Spring clamp; small

	206-1206	1
--	----------	---

PUR spring set

	206-1207	1
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Crimping tool "Variocrimp 16"; for insulated and uninsulated ferrules; Crimping range: 6 mm<sup>2</sup> (10 AWG), 10 mm<sup>2</sup> (8 AWG) and 16 mm<sup>2</sup> (6 AWG)

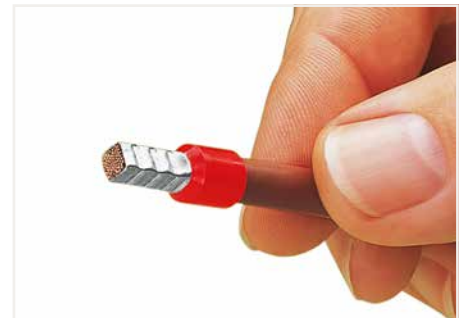
	Item No.	Pack. Unit
	206-1216	1

Spring clamp; small

	206-1206	1
--	----------	---

### Application notes:

- The built-in crimping pressure control of "Variocrimp 4" automatically adjusts the crimping force to the conductor cross section. Select the wire gauge on "Variocrimp 16" before crimping.
- Only one crimping station is needed to handle the specified conductor range.
- Uniform, compact crimping on all four sides for high conductor retention.
- No need to center the ferrules into the terminal blocks.
- Crimping can be performed from either side (for left- or right-handed users).
- Built-in ratchet mechanism ensures gas-tight crimp connection.
- Crimping tools open automatically after crimping operation is complete.
- Ergonomically designed handles.



A perfect gas-tight crimp – both electrically and mechanically reliable



Insert the ferruled conductor into the crimping station.



Squeeze handles until ratchet mechanism is released.



Only for "Variocrimp 16":  
Adjust conductor cross section with crimping tool in open position.

## Ferrule 206 Series

Sleeve for mm <sup>2</sup>	AWG	Color Code	Strip Length mm	L	L1	D	D1	D2	Item No.	Pack. Unit
Ferrule; insulated; extra long for TOBJOB® S Terminal Blocks										
0.5	22	○	12	16	10	3.1	2.6	1	216-241	1000
0.75	20	○	12	16	10	3.3	2.8	1.2	216-242	1000
0.75	20	○	14	18	12	3.3	2.8	1.2	216-262	1000
1	18	●	12	16	10	3.5	3	1.4	216-243	1000
1	18	●	14	18	12	3.5	3	1.4	216-263	1000
1.5	16	●	12	16	10	4	3.5	1.7	216-244	1000
1.5	16	●	14	18	12	4	3.5	1.7	216-264	1000
1.5	16	●	20	24	18	4	3.5	1.7	216-284	1000
2.5	14	●	12	17	10	4.7	4.2	2.2	216-246	1000
2.5	14	●	14	19	12	4.7	4.2	2.2	216-266	1000
2.5	14	●	20	25	18	4.7	4.2	2.2	216-286	1000
4	12	○	14	20	12	5.4	4.8	2.8	216-267	1000
4	12	○	20	26	18	5.4	4.8	2.8	216-287	500
6	10	●	14	20	12	6.9	6.3	3.5	216-208	1000
6	10	●	20	26	18	6.9	6.3	3.5	216-288	500
10	8	●	20	28	18	8.4	7.6	4.5	216-289	500
16	6	●	23	28	18	9.6	8.8	5.8	216-210	500

### Ferrule; insulated; in standard length

0.25	24	●	7.5	10.5	6	2.5	2	0.8	216-321	1000
0.25	24	●	9.5	12.5	8	2.5	2	0.8	216-301	1000
0.35	24	●	7.5	10.5	6	2.5	2	0.8	216-322	1000
0.34	24	●	9.5	12.5	8	2.5	2	0.8	216-302	1000
0.5	22	○	7.5	11.5	6	3	2.5	1.1	216-221	1000
0.5	22	○	9.5	13.5	8	3	2.5	1.1	216-201	1000
0.75	20	○	8	12	6	3.3	2.8	1.3	216-222	1000
0.75	20	○	10	14	8	3.3	2.8	1.3	216-202	1000
1	18	●	8	12	6	3.6	3	1.5	216-223	1000
1	18	●	10	14	8	3.6	3	1.5	216-203	1000
1.5	16	●	8	12	6	4	3.4	1.8	216-224	1000
1.5	16	●	10	14	8	4	3.4	1.8	216-204	1000
2.08	14	●	10	14.5	8	4.2	3.6	2.05	216-205	1000
2.5	14	●	10	15	8	4.8	4.2	2.3	216-206	1000
4	12	○	12	16.8	9.5	5.4	4.8	2.9	216-207	1000
6	10	●	14	20	12	6.8	6.2	3.5	216-208	1000
10	8	●	16	21	12	8.1	7.5	4.6	216-209	1000
16	6	●	23	28	18	9.6	8.8	5.8	216-210	500

### Twin ferrule; insulated; extra long for TOBJOB® S Terminal Blocks

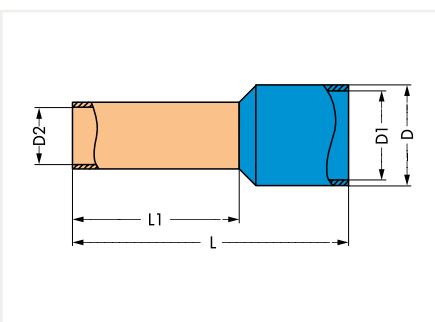
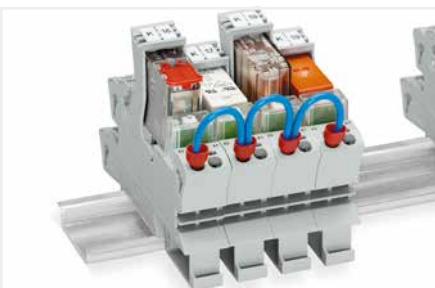
2 x 1.0	2 x 18	●	12	19.2	12	5.8x3.2	5.2x2.6	2	216-542	500
2 x 2.5	2 x 14	●	12	21	12	8.0x4.5	7.2x3.7	2.8	216-545	100
2 x 4.0	2 x 12	○	12	22	12	9.0x5.2	8.0x4.2	3.5	216-546	200
2 x 6.0	2 x 10	●	12	23	12	11.4x6.2	10.4x5.2	4.5	216-547	1

### Ferrule; uninsulated; in standard length

0.25	24		5	5		1.7		0.75	216-151	5000
0.25	24		7	7		1.7		0.75	216-131	5000
0.34	24		5	5		1.7		0.85	216-152	5000
0.34	24		7	7		1.7		0.85	216-132	5000
0.5	22		6	6		2.1		1	216-121	5000
0.5	22		8	8		2.1		1	216-101	5000
0.75	20		6	6		2.3		1.2	216-122	5000
0.75	20		8	8		2.3		1.2	216-102	5000
1	18		6	6		2.5		1.4	216-123	5000
1	18		8	8		2.5		1.4	216-103	5000
1.5	16		6	6		2.8		1.7	216-124	5000
1.5	16		8	8		2.8		1.7	216-104	5000
2.5	14		10	10		3.4		2.2	216-106	5000
4	12		10	10		4		2.8	216-107	5000
6	10		12	12		4.7		3.5	216-108	1000
10	8		12	12		5.8		4.5	216-109	500
16	6		12	15		7.5		5.8	216-110	500



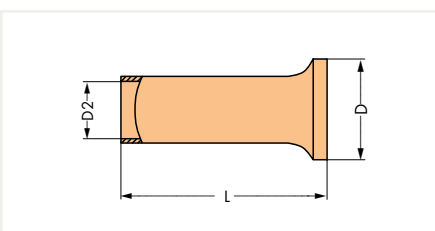
Insulated ferrules

Insulated ferrule  
For letters with the corresponding dimensions, see table opposite.

Wire bridge with twin ferrules



Uninsulated ferrules



Uninsulated ferrule

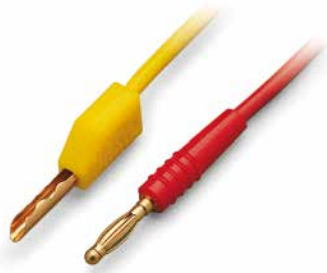
## Test and Measurement Device; Test Plug; Test Pin

### 206, 210, 735 Series



Testboy; non-contact voltage tester; with integrated flashlight; voltage range: 12 ... 1000 VAC

	Item No.	Pack. Unit
	206-804	1



Test plug; 500 mm cable length

Color	Ø	Item No.	Pack. Unit
red	2 mm	210-136	50
yellow	2.3 mm	210-137	50



Test pin; with solder connection; for test cable

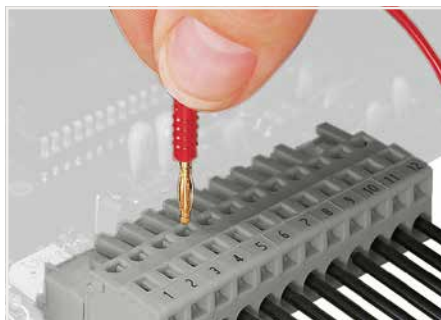
Ø	Item No.	Pack. Unit
1 mm	735-500	1



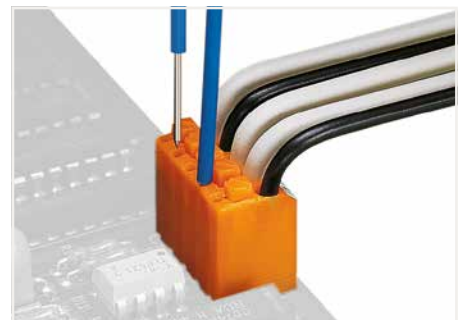
A device that will reliably detect AC voltage in cables, sockets, fuses, switches, outlets and other installations.

Testboy can detect the following:

- Live conductors
- Cable breaks
- Blown fuses (in cartridges or holders)
- Defective switches
- Defective lamps in strings of lights



Testing with a 2 mm Ø test plug.



Testing with a 1 mm Ø test pin – touch contact.

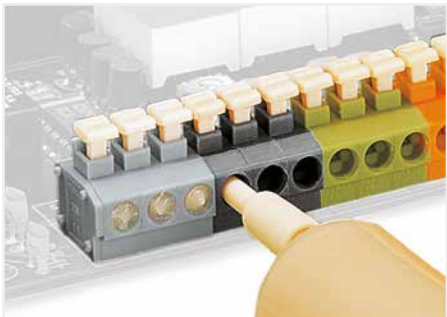
“Alu-Plus” Contact Paste  
249 Series



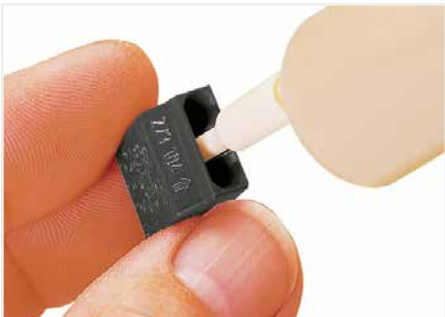
“Alu-Plus” syringe;  
contains 20 ml “Alu-Plus” contact paste; for reliable  
connection of solid aluminum conductors\* up to 4 mm²  
in WAGO spring clamp terminal blocks

Item No.	Pack. Unit
249-130	20 (4 x 5)

“Alu-Plus” Contact Paste
<ul style="list-style-type: none"><li>• Prevents fresh oxidation at the clamping point.</li><li>» • Prevents electrolytic corrosion between aluminum and copper conductors.</li><li>• Provides long-term protection against corrosion.</li></ul>
* Aluminum conductors per IEC 61545 standard, » Class B, “Alloy 1370” with 90–180 N/mm² tensile strength and 1–4 % elongation.
Use “Alu-Plus” contact paste when terminating solid » aluminum conductors in WAGO spring clamp terminal blocks.
“Alu-Plus” contact paste also allows WAGO spring » clamp terminal blocks to properly terminate solid aluminum conductors up to 4 mm²/12 AWG.
Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, aluminum conductors must first be cleaned and then immediately be » inserted into the clamping units filled with “Alu-Plus” contact paste.
It is also possible to apply WAGO “Alu-Plus” additionally on the whole surface of the aluminum conductor » before termination.
Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors: »
2.5 mm² (14 AWG) = 16 A 4 mm² (12 AWG) = 22 A



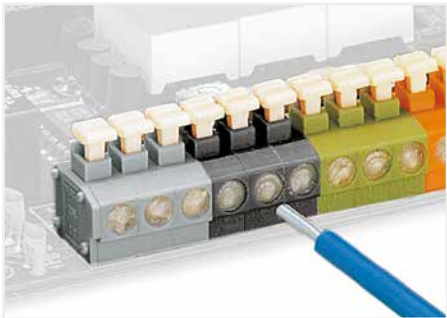
Push nozzle of the “Alu-Plus” syringe into every open conductor entry hole (one after the other).



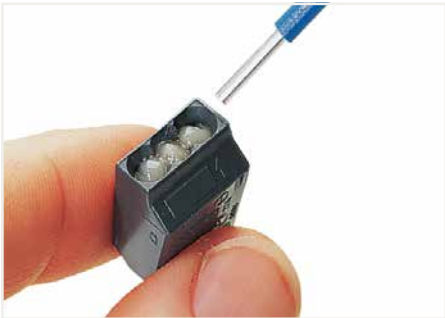
WAGO Junction Box Connectors  
Push nozzle of the “Alu-Plus” syringe into the center conductor entry hole of the WAGO junction box connector.



WAGO Lighting Connectors  
Push nozzle of the “Alu-Plus” syringe first into the circular and then into the square conductor entry hole of the WAGO lighting connector.



Press plunger down until “Alu-Plus” has filled all conductor entry holes.



Press plunger down until “Alu-Plus” is visible in the other holes.

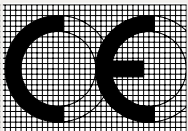

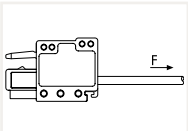







Press plunger down until the “Alu-Plus” has filled both entry holes.



# Technical Section

## Technical Section

		Page
	CE Marking and EC Directives	277
	IEC/EN Specifications	
	Tests and Testing Procedures per IEC/EN Standards	280
	– Mechanical Tests	
	– Electrical Tests	
	– Material Tests	
	– Environmental Tests	
	UL Specifications – Underwriters Laboratories, USA	300
	– Tests and Testing Procedures per UL Standards	
	Terminating Aluminum Conductors	305
	Processing Information and Material Specifications	306
	– Soldering Information	
	– Insulation Materials	
	– Contact Materials, Contact Plating, Clamping Spring Material	
	General Technical Information on Electrical Equipment Used in Hazardous Areas	309
	– “Increased Safety Ex e” Requirements	
	– “Intrinsic Safety Ex i” Requirements	
	Electrical Engineering Laboratory	320
	Environmental Protection at WAGO	322

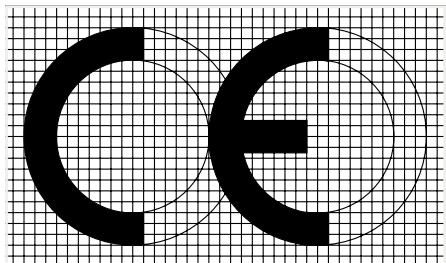




## CE Marking and EC Directives

### CE Conformity Marking:

The CE conformity marking consists of the characters "CE" with the following script:



Communauté Européenne  
(European Community)

**EC directives** are legally binding specifications for the European Union. Their goal is aligning legal and administrative specifications in the various EU member countries, in order to prevent trading hindrances arising from different national specifications.

In order to launch a product on the market, it must comply with the relevant directives. Several directives may apply for one single product, for example, EMC and low voltage directives.

The following EC directives apply to WAGO products:

#### 2014/35/EU – Low Voltage Directive (LVD)

The LVD covers all electrical equipment operating with a voltage between 50 and 1000 VAC and between 75 and 1500 VDC.

This directive applies to products, such as rail-mount terminal blocks, splicing connectors, modular terminal blocks, terminal strips, etc., which comply with the specifications of the coordinated European standards and their specific parts (e.g., EN 60947 for rail-mount terminal blocks and EN 60998 for splicing connectors). The CE conformity marking must be applied to all electrical equipment; should on-unit marking not be possible, mark the smallest packing unit. With this marking, manufacturers attest conformity of their products to relevant directives.

In addition to the CE marking, manufacturers provide an EC "Declaration of Conformity" for their products. This declaration of con-

formity must be retained and submitted to a national surveillance authority upon request.

#### 2014/30/EU – EMC Directive

This directive applies to any devices, equipment and systems containing electric or electronic components. The German Federal Office for Post and Telecommunications (Bundesamt für Post und Telekommunikation, BAPT) is authorized to draw a distinction between elementary and complex components. Elementary components, such as resistors, transformers, ICs, relays, etc., are not provided with marking. For complex components, such as electro-motors, electronic cards, thermostats, etc., the EMC directives apply only if these components are sold directly to the end user.

All products subject to the application scope of the EMC directive must display the CE marking on their housing. This marking proves conformity with the corresponding standards.

#### 2006/42/EC – Machinery Directive

This directive applies to complete machines or equipment.

The manufacturers of machines or equipment are, however, obliged to use components which meet the corresponding EC directives (e.g., Low Voltage or EMC Directives).

Fulfillment and conformity with these directives is required for the free exchange of goods within Europe.

#### 2014/34/EU – ATEX Directive

Explosion-proof devices – General Technical Information on Electrical Equipment Used in Hazardous Areas

## IEC/EN Specifications

The following standards apply to the design and application of the terminal blocks and connectors contained in this catalog:

IEC 60364-1 HD 60364-1 VDE 0100-100 / Low-voltage electrical installations - Part 1: Fundamental principles, assessment of general characteristics, definitions	IEC 60079-7 EN 60079-7 VDE 0170-6 / Explosive atmospheres – - Part 7: Equipment protection by increased safety "e"	EN 61439-3 VDE 0660-600-3 /- Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO)
IEC 61140 EN 61140 VDE 0140-1 / Protection against electric shock - Common aspects for installation and equipment	IEC 60079-11 EN 60079-11 VDE 0170-7 / Explosive atmospheres – - Part 11: Equipment protection by intrinsic safety "i"	IEC 61643-11 EN 61643-11 VDE 0675-6-11 / Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
IEC 60364-7-710 HD 60364-7-710 VDE 0100-710 - Part 7-710: Requirements for special installations or locations - Medically used areas	IEC 60079-14 EN 60079-14 VDE 0165-1 / Explosive atmospheres – - Part 14: Electrical installations design, selection and erection	IEC 60335-1 EN 60335-1 VDE 0700-1 / Safety of household and similar electrical appliances - Part 1: General requirements
IEC 60364-7-718 HD 60364-7-718 VDE 0100-718 - Part 7-718: Requirements for special installations or locations - Communal facilities and workplaces	IEC 60079-15 EN 60079-15 VDE 0170-16 / Explosive atmospheres – - Part 15: Equipment protection by type of protection "n"	IEC 60598-1 EN 60598-1 VDE 0711-1 / Lighting fixtures - Part 1: General requirements and tests
EN 50110-1 VDE 0105-1 / Operation of electrical installations - Part 1: General requirements	IEC 60038 EN 60038 VDE 0175-1 / IEC CENELEC standard voltages	IEC 60715 EN 60715 / Standardized mounting on rails for mechanical support of electrical devices in switchgear and controlgear installations
IEC 60664-1 EN 60664-1 VDE 0110-1 / Insulation coordination for equipment with in low-voltage systems - Part 1: Principles, requirements and tests	VDE 0298-4 / Application of cables and flexible cords in power installations - Part 4: Recommended values for current carrying capacities of cables for fixed installation and for flexible cables	IEC 60999-1 EN 60999-1 VDE 0609-1 / Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units - Part 1: General requirements and particular requirements for clamping units for conductors from 0.2 mm <sup>2</sup> up to 35 mm <sup>2</sup> (included)
IEC 60204-1 EN 60204-1 VDE 0113-1 / Electrical equipment for machinery - Part 1: General requirements	IEC 60112 EN 60112 VDE 0303-11 / Method for determining the comparative and the proof tracking indices of solid insulating materials	IEC 60999-2 EN 60999-2 VDE 0609-101 - Part 2: General requirements and particular requirements for clamping units for conductors from 35 mm <sup>2</sup> up to 300 mm <sup>2</sup> (included)
IEC 60079-0 EN 60079-0 VDE 0170-1 / Explosive atmospheres Part 0: Equipment - General requirements	IEC 60529 EN 60529 VDE 0470-1 / Degrees of protection provided by enclosures (IP code) - Testing equipment and testing method	
	IEC 61439-1 EN 61439-1 VDE 0660-600-1 / Low-voltage switchgear and control-gear assemblies - Part 1: General rules IEC 61439-3	

IEC 60998-1 EN 60998-1 E VDE 0613-1 / Connecting devices for low-voltage circuits for household and similar purposes - Part 1: General requirements	IEC 61984 EN 61984 VDE 0627 / Connectors - Safety requirements and tests	IEC 60352-7 EN 60352-7 - Part 7: Spring clamp connections - General requirements, test methods and practical guidance
IEC 60998-2-1 EN 60998-2-1 VDE 0613-2-1 - Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units	IEC 60512-1 EN 60512-1 / Connectors for electronic equipment – Tests and measurements - Part 1: General	
IEC 60998-2-2 EN 60998-2-2 VDE 0613-2-2 - Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units	IEC 60320-1 EN 60320-1 VDE 0625-1 / Appliance couplers for household and similar general purposes - Part 1: General requirements	
IEC 60998-2-3 EN 60998-2-3 VDE 0613-2-3, - Part 2-3: Particular requirements for connecting devices as separate entities with insulation-piercing clamping units	IEC 60352-1 EN 60352-1 / Solderless connections; - Part 1: Wrapped connections - General requirements, test methods and practical guidance	
IEC 60947-1 EN 60947-1 VDE 0660-100 / Low-voltage switchgear and controlgear - Part 1: General rules	IEC 60352-2 EN 60352-2 / Solderless connections; - Part 2: Crimped connections - General requirements, test methods and practical guidance	
IEC 60947-7-1 EN 60947-7-1 VDE 0611-1 - Part 7-1: Ancillary equipment Terminal blocks for copper conductors	IEC 60352-3 EN 60352-3 - Part 3: Solderless accessible insulation displacement connections - General requirements, test methods and practical guidance	
IEC 60947-7-2 EN 60947-7-2 VDE 0611-3 - Part 7-2: Ancillary equipment Protective conductor terminal blocks for copper conductors	IEC 60352-4 EN 60352-4 - Part 4: Solderless non-accessible insula- tion displacement connections - General requirements, test methods and practical guidance	
IEC 60947-7-3 EN 60947-7-3 VDE 0611-6 - Part 7-3: Ancillary equipment Safety requirements for fuse terminal blocks	IEC 60352-5 EN 60352-5 - Part 5: Press-in connections - General requirements, test methods and practical guidance	
IEC 60947-7-4 EN 60947-7-4 VDE 0611-4 - Part 7-4: Ancillary equipment – PCB terminal blocks for copper conductors	IEC 60352-6 EN 60352-6 Part 6: Insulation piercing connections - General requirements, test methods and practical guidance	

## Tests and Testing Procedures per IEC/EN Standards (continued)

Products such as connecting devices, rail-mount terminal blocks and connectors, etc., have their own product-specific test specifications. The following sections describe the most important tests and are limited to a description of the test procedures and an explanation of the test purpose. The data shown (e.g., voltages, temperatures, forces) only serve as illustration and may differ depending on the test.

### Mechanical Tests

All WAGO products meet requirements for the following mechanical tests:

#### • Termination Requirements

##### Conductor Termination

Two WAGO connection systems are proven in the field of Spring Pressure Connection Technology:

The **PUSH WIRE®** connection for applications requiring solid conductors ranging from 0.2 ... 4 mm<sup>2</sup> / 0.28 ... 4 AWG (e.g., for lighting and building wiring, telecommunications, house communication or alarm systems).

The **universal CAGE CLAMP® spring pressure connection** for solid, stranded and fine-stranded conductors ranging from 0.08 to 35 mm<sup>2</sup> (28 ... 2 AWG) and designed for a variety of industrial, electrical and electronic applications (e.g., fine-stranded conductors in the elevator industry, in power stations, in the chemical and automotive

industry, and aboard ships).

The **Push-in CAGE CLAMP® connection** takes universal CAGE CLAMP® connections further by allowing the termination of 0.2 to 16 mm<sup>2</sup> (24 ... 6 AWG) solid, stranded and fine-stranded conductors (25 mm<sup>2</sup>/4 AWG only "f-st") and offering all the benefits and safety of the original CAGE CLAMP®. Furthermore, the Push-in CAGE CLAMP® connection technology allows solid and stranded conductors from 0.5 to 16 mm<sup>2</sup> (20 ... 6 AWG), as well as 0.5 to 16 mm<sup>2</sup> (20 ... 6 AWG) ferruled stranded conductors to be terminated by simply pushing them in. Fine-stranded conductors of small or very small size are highly flexible, and deform when pushed against the conductor stop in terminal blocks. As a result, the conductor

insulation – not the copper conductor – may be clamped, causing intermittent contact or no contact at all.

In order to prevent conductor insulation from being inserted into the clamp, insulation stops are available, even providing protection for 0.08 mm<sup>2</sup> (28 AWG) conductors.

### Rated Cross-Sections and Connectable Conductors

I. Per IEC 60999-1 / EN 60999-1 / VDE 0609, Part 1, Table 1:

Rated Cross-Section	Theoretical Largest Conductor Diameter							Connectable Conductor	
	Metric			AWG				Rigid	Flexible
	Rigid		Flexible	Rigid			Flexible		
	Solid	Stranded			b)  Solid	b) Class B  Stranded	c) Class I, K, M Stranded		
mm²	mm	mm	mm	Conductor Size	mm	mm	mm	To be defined in the corresponding product standard	
0.2	0.51	0.53	0.61	24	0.54	0.61	0.64		
0.34	0.63	0.66	0.8	22	0.68	0.71	0.8		
0.5	0.9	1.1	1.1	20	0.85	0.97	1.02		
0.75	1.0	1.2	1.3	18	1.07	1.23	1.28		
1.0	1.2	1.4	1.5	–	–	–	–		
1.5	1.5	1.7	1.8	16	1.35	1.55	1.6		
2.5	1.9	2.2	2.3 <sup>a)</sup>	14	1.71	1.95	2.08		
4.0	2.4	2.7	2.9 <sup>a)</sup>	12	2.15	2.45	2.7		
6.0	2.9	3.3	3.9 <sup>a)</sup>	10	2.72	3.09	3.36		
10.0	3.7	4.2	5.1	8	3.34	3.89	4.32		
16.0	4.6	5.3	6.3	6	4.32	4.91	5.73		
25.0	–	6.6	7.8	4	5.45	6.18	7.26		
35.0	–	7.9	9.2	2	6.87	7.78	9.02		

NOTE: The diameters of the largest rigid and flexible conductors are based on Table 1 of IEC 60228 A/IEC 60344 and on ASTM B172-71 [4], IECA Publication S-19-81 [5], IECA Publication S-66-524 [6], as well as IECA Publication S-66-516 [7] for AWG conductors.

a) Dimensions for Class 5 flexible conductors only (IEC 60228 A)

b) Nominal diameter + 5%

c) Largest diameter for conductors of classes I, K, M + 5%

**In practical use, the conductor cross-sections are approximately 5% below the values stated in the table!**

The IEC 60999-1/EN 60999-1/VDE 0609 Specification (Part 1, Section 7.1) requires that:

**Clamping units must be able to connect unprepared conductors.**

Under normal operating conditions, direct clamping (i.e., directly connecting a conductor to the terminal block's current bar) provides optimal contact quality, because all risk factors arising from anti-splaying methods are prevented.

Occasionally, conductor anti-splaying protection may be required, including various methods (see illustrations below).

Special requirements apply only in special application areas exposed to extremely corrosive atmospheres.

In this case, we recommend using either solid copper conductors or fine-stranded copper conductors with properly crimped, tin-coated copper ferrules or copper pin terminals.

As with solid copper conductors, the fine strands are crimped to a dense inner core. This prevents ingress of aggressive atmospheres (depending on the ppm concentration), which can diffuse into the conductor bundle along the individual strands and

cause corrosion deposits between individual strands and the clamping point.

**One Conductor per Clamping Unit**

A number of VDE specifications specify that **only one conductor must be connected per clamping unit** (e.g., DIN VDE 0611, Part 4, 02.91, Section 3.1.9). The same applies to the recommendations of the German Automotive Industry Association (VDA) "Supply specification for the electrical equipment of machines, mechanical installations and buildings in the automotive industry" according to Section 15.1.1.3; Draft 8.93.

Other VDE and EN specifications also recommend the connection of **only one conductor per clamping unit**, unless the clamping unit is specifically tested and approved for the connection of several conductors, for example:

VDE 0609-1, 12.00/

EN 60999-1:2000, Section 7.1

VDE 0660, Part 600, 06.12

EN 61439-1:2011, Section 8.6.3

VDE 0113-1, 06.07/

EN 60204-1:2006, Section 13.1.1

One conductor per clamping unit is therefore recommended to meet the safety requirements of these relevant specifications. This WAGO principle is the basis for a number of other technical and economic advantages:

- Each conductor may be terminated or removed without affecting previously connected conductors.
- Where re-wiring is required, only the conductor to be changed is removed from the clamping point, all other conductors remain safely clamped.
- Each conductor is clamped independently.
- Any conductor size combination can be connected.

II. Per IEC 60999-2 / EN 60999-2 / VDE 0609, Part 101, Table 1:

Rated Cross-Section	Theoretical Largest Conductor Diameter					Connectable Conductor	
	Metric		AWG/Kcmil				
	Rigid	Fine-Stranded <sup>a)</sup>	Gauge	Rigid	Fine-Stranded		
	Stranded			Stranded			
mm <sup>2</sup>	mm	mm		mm	mm	Rigid	Flexible
50	9,1	11	0	9.64	12.08	To be defined in the corresponding product standard	
70	11	13.1	00	11.17	13.54		
95	12.9	15.1	000	12.54	15.33		
–	–	–	0000	14.08	17.22		
120	14.5	17	250	15.34	19.01		
150	16.2	19	300	16.8	20.48		
185	18.0	21	350	18.16	22.05		
–	–	–	400	19.42	24.05		
240	20.6	24	500	21.68	26.57		
300	23.1	27	600	23.82	30.03		

a) Dimensions for Class 5 flexible conductors only (IEC 60228A)

NOTE: The diameters of the largest rigid and flexible conductors are based on Table 1 and Table 3 of IEC 60228 and on ASTM B172-71 [1], IECA Publication S-19-81 [2], IECA Publication S-66-524 [3], as well as IECA Publication S-66-516 [7] for AWG conductors.



Tip-bonded conductor



Ultrasonically bonded conductor



Crimped pin terminal (gas-tight), preferably made of copper with a tin-plated surface



Tin-plated copper ferrule (gas-tight crimped)

Anti-splaying methods require a terminal block one size larger than the nominal cross-section of the conductor to be terminated.

**Ferruled conductor cross-sections specified for individual products are based on WAGO's Variocrimp square crimping technology.**

Gas-tight, crimped twin ferrules may be used, provided the ferrule is inserted all the way into the clamping unit and that there is a sufficient clearance and creepage distance between adjacent potentials.

WAGO provides 2-conductor terminal blocks and connectors to increase the number of clamping units.



## Tests and Testing Procedures per IEC/EN Standards (continued)

### Mechanical Tests (continued)

#### • Pull-Out Test per IEC/EN 60947-7-1, IEC/EN 60998-2-2, IEC/EN 60999-1

The pull-out test simulates the mechanical stress on the clamping unit when, for example, the installer pushes the conductor aside to better access/operate the adjacent clamping unit, or verifies if the conductor is connected properly by briefly pulling on it.

During the test, a pulling force is applied without jerking, for one minute, to the connected conductor. The pulling force is selected according to the cross-sectional area. The larger the cross-section of the conductor, the higher the pull-out force that is selected. For example, the pulling force is 40 N for a conductor having a cross-section of 1.5 mm<sup>2</sup> (16 AWG) and 100 N for a conductor with a cross-section of 16 mm<sup>2</sup> (6 AWG). The values specified by these standards are the same for both screw clamp and spring clamp terminal blocks. During the test, the conductor must neither slip out of the clamping unit, nor break near the clamping unit.

#### Conductor Pull-Out Forces

The clamping units of screwless terminal blocks must withstand the pull-out forces as follows:

IEC 60947-1/EN 60947-1/VDE 0660-100, Table 5:

Low-voltage switchgear and controlgear – General rules

IEC 60947-7-1/EN 60947-7-1/

VDE 0611-1, rail-mount terminal blocks for copper conductors

IEC 60998-2-1/EN 60998-2-1/

VDE 0613-2-1, Table 104

IEC 60998-2-2/ EN 60998-2-2/VDE

0613-2-2, Table 103:

Connecting devices for low-voltage circuits for household and similar purposes

Particular requirements for connecting devices as separate entities with screw clamp or screwless terminal blocks

IEC 60999-1/EN 60999-1/VDE 0609-1,

Table 3:

IEC 60999-2/EN 60999-2, /VDE 0609-101,

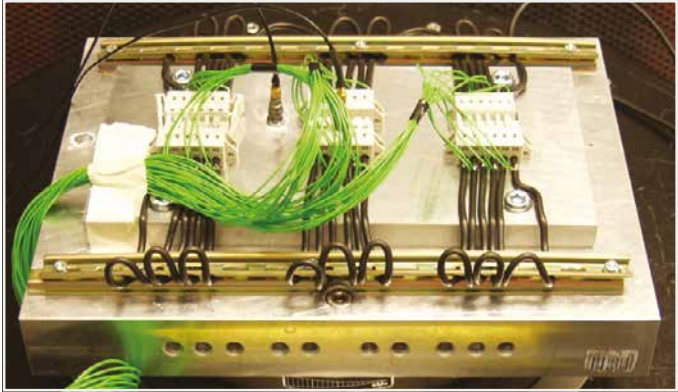
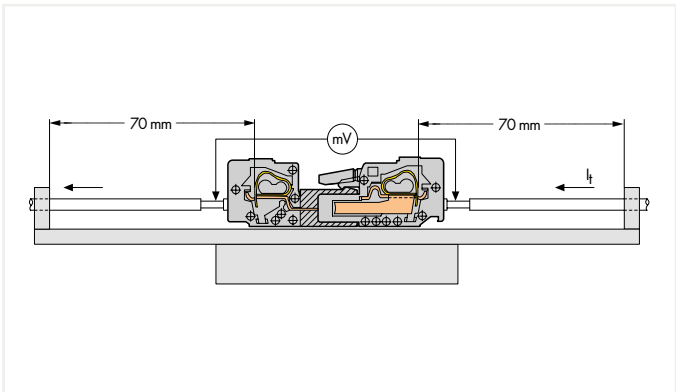
Table 2:

Safety requirements for screw-clamp and screwless clamping units for electrical copper conductors

Rated Cross-Section		Pull-Out Forces per IEC/EN		
mm <sup>2</sup>	AWG/kcmil	60947-7-1 N	60998-2-2 N	60999-1/-2 N
0.2	24	10	10	10
0.34	22	15	15	15
0.5	20	20	20	20
0.75	18	30	30	30
1.0	–	35	35	35
1.5	16	40	40	40
2.5	14	50	50	50
4.0	12	60	60	60
6.0	10	80	80	80
10	8	90	90	90
16	6	100	100	100
25	4	135	135	135
–	3	156		
35	2	190	190	190
–	1	236		
50	0	236		236
70	00	285		285
95	000	351		351
–	0000	427		427
120	250	427		427
150	300	427		427
185	350	503		503
–	400	503		503
240	500	578		578
300	600	578		578

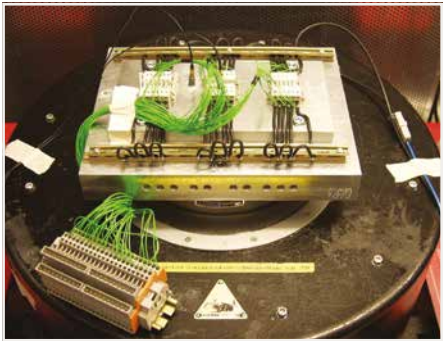
• Shock/Vibration Test per IEC/EN 60068-2-6; DNV GL, LR (Marine Applications); IEC/EN 61373 (Railway Applications)

The vibration test determines whether vibrations, such as those produced in the vicinity of machines or in vehicles, will permanently affect the electrical connection, or if contact breaks will occur during vibrations. Using a vibration table, the test specimen is subjected to vibration in each of the X, Y and Z axes (see pictures). The amplitude, acceleration and in particular the frequency of the vibration must vary during the test.

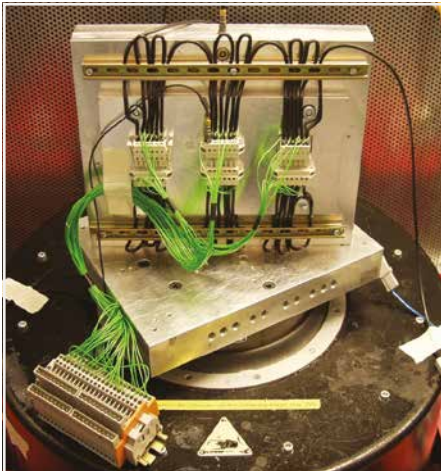


The “open length” of the conductor up to the point where the conductor is attached in the application must be kept as short as possible (length = 70 mm in this example).

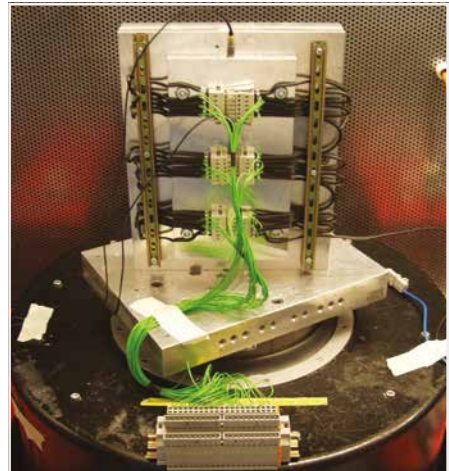
1st Axis



2nd Axis



3rd Axis



The exact test procedure may vary considerably, depending on how the product will be used.

Application Examples per IEC/EN 60068-2-6	Associated Test Levels	
Devices attached to heavy, rotating machines	1 ... 35 Hz,	50 m/s² (5 g) or 100 m/s² (10 g)
Devices designed for use in large-scale power plants and general industrial applications	10 ... 55 Hz,	20 m/s² (2 g) 50 m/s² (5 g)
Devices designed for use in large-scale power plants and general industrial applications if it has been determined that detectable vibration components greater than 55 Hz exist	10 ... 150 Hz,	20 m/s² (2 g) 50 m/s² (5 g)

Some test specifications require the determination of possible resonant frequencies, i.e., determining if resonance occurs within the frequency spectrum to be passed through. Analyzing the specimen behavior under the influence of resonant frequencies is performed using a special testing procedure.

## Tests and Testing Procedures per IEC/EN Standards (continued)

### Mechanical Tests (continued)

Beyond these standard procedures, each market segment performs additional testing. Examples include railway authorities testing rolling electrical equipment, or the testing performed multiple marine agencies (e.g., DNV GL Group, Lloyd's Register of Shipping). Though the requirements of such testing procedures are particularly demanding, test arrangements are identical for all of them. During vibrations, possible contact breaks are monitored on an oscilloscope. Voltage drop is measured before and after the test to detect permanent failures, i.e., checking if electrical resistance at the clamping unit has not increased beyond the permissible limit. The smaller this value is, the smaller the contact resistance of the clamping unit.

The test is passed if:

- the conductor has neither slipped out of the terminal block nor been damaged,
- the maximum permissible voltage drop has not been exceeded
- and neither contact breaks have occurred nor a defined break time has been exceeded.

The test specimen must not be damaged in any way that might affect future use.

Since their inception, both CAGE CLAMP® and Push-in CAGE CLAMP® connections have been routinely tested for their resistance to shock/vibration in connection with approval tests.

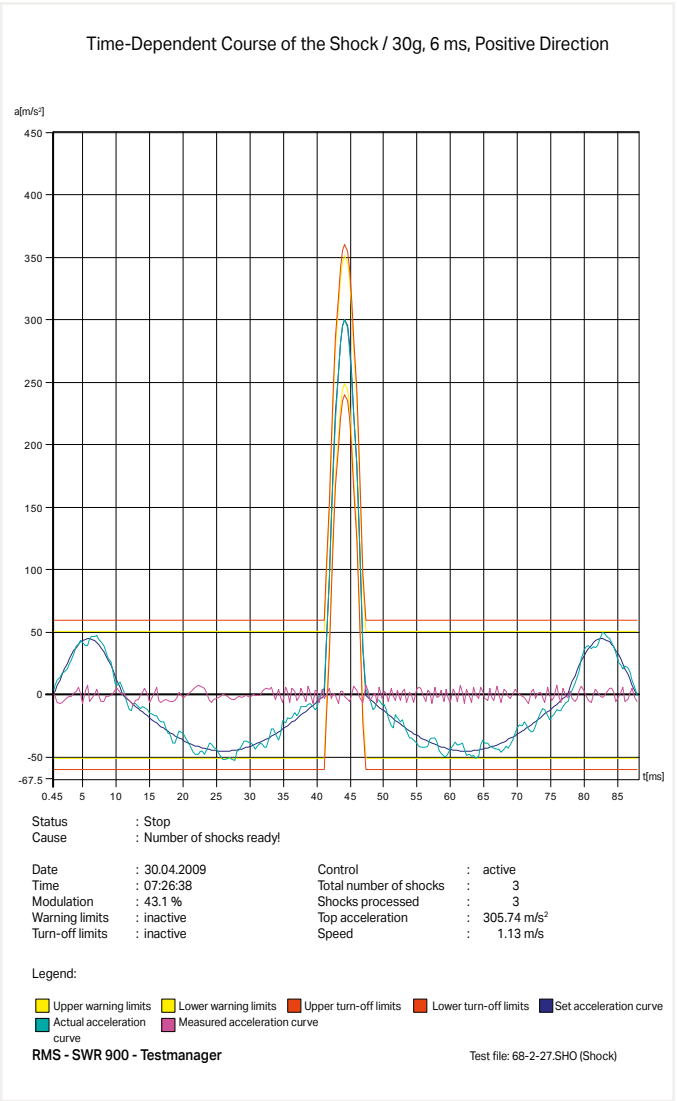
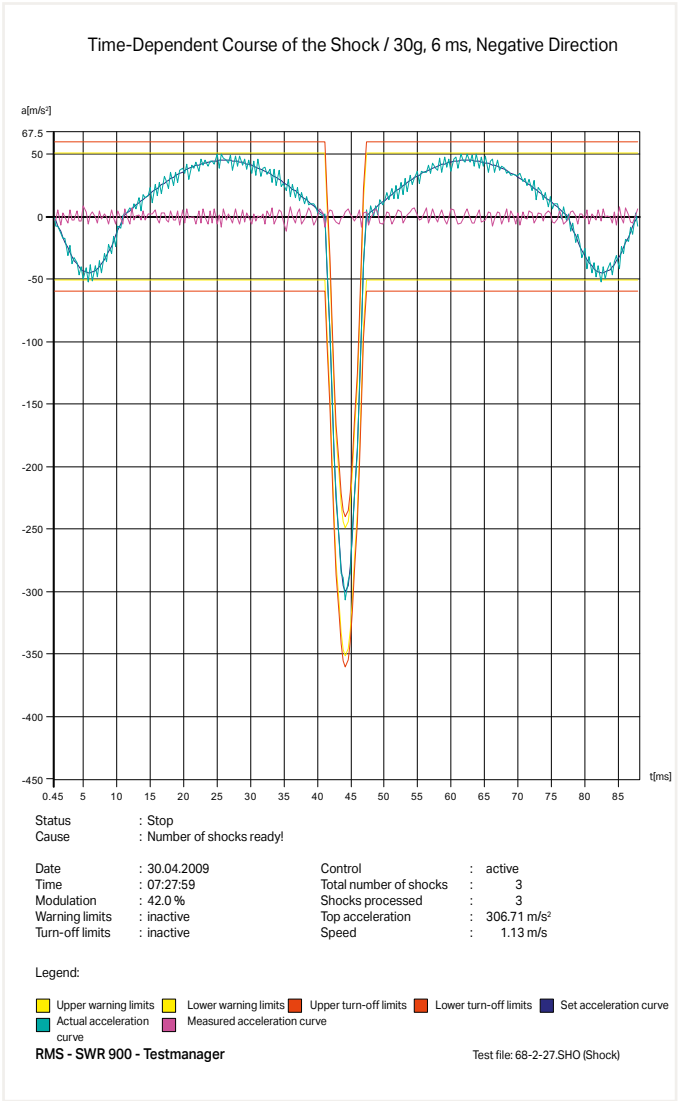
#### Notes:

These test results are based solely on tests conducted under "laboratory conditions." Connector usage in actual applications must be evaluated by the user.

• Shock Test per IEC/EN 60068-2-27; IEC/EN 61373 (Railway Applications)

The shock test is similar to the vibration test except that, instead of continuous vibrations, single shocks are applied to the specimen. Shock tests are usually performed with an acceleration of 15g, for example, over a period of 11 ms. Tests for special requirements often call for much higher values. Like the vibration tests, shock tests are primarily used to test the voltage drop variation or contact breaks, etc.

E.g.: **Shock requirement**  
per IEC/EN 60068-2-27 (half-sine shock)  
30g acceleration, 6 ms duration  
Shock direction: 3 axes (3 shocks each in positive and negative direction)



## Tests and Testing Procedures per IEC/EN Standards (continued)

### Electrical Tests

All WAGO products meet requirements for the following electrical tests:

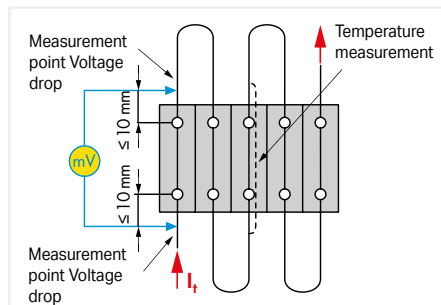
- Temperature-Rise Test per IEC/EN 61984, IEC/EN 60947-7-1, IEC/EN 60998-1

The temperature-rise test examines the clamping unit – including the surrounding insulation – at rated current, over-current and short-circuit current levels.

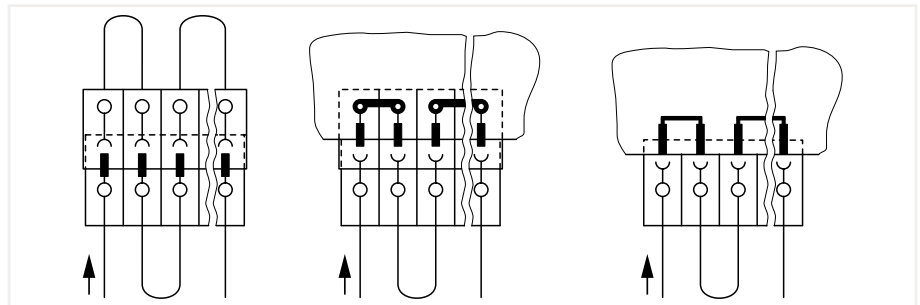
Unless otherwise specified in the related equipment specification, e.g., by specifying the nominal currents of the equipment, terminal blocks and connectors are tested with current loads as specified in the respective construction specification.

For rail-mount terminal blocks complying with IEC 60947-7-1/EN 60947-7-1/VDE 0611-1, or terminal blocks complying with IEC 60998-1/EN 60998-1/VDE 0613-1, the temperature rise must not exceed 45 Kelvin.

Connectors must withstand the upper and lower values of the temperature range as specified in the detail or manufacturer's specification. The sum of the ambient operating temperature and the temperature rise of a connector must not exceed the upper temperature limit.



Test arrangement: "Temperature-Rise Test" per IEC/EN 60947-7-1



Test arrangement: "Temperature-Rise Test" per IEC/EN 61984

Rated Cross-Section	Test Current per IEC/EN		Conductor Size	Test Current per IEC/EN 60947-7-1 Table 5
	60947-7-1 Table 4	60998-1 Table 2		
mm <sup>2</sup>	A	A	AWG/kcmil	A
0.2	4.0	4.0	24	4
0.34	5.0	5.0	22	6
0.5	6.0	6.0	20	8
0.75	9.0	9.0	18	10
1.0	13.5	13.5	-	-
1.5	17.5	17.5	16	16
2.5	24	24	14	22
4.0	32	32	12	29
6.0	41	41	10	38
10	57	57	8	50
16	76	76	6	67
25	101	101	4	90
35	125	125	2	121
-	-	-	1	139
50	150	-	0	162
70	192	-	00	185
95	232	-	000	217
-	-	-	0000	242
120	269	-	250 kcmil	271
150	309	-	300 kcmil	309
185	353	-	350 kcmil	353
240	415	-	500 kcmil	415
300	520	-	600 kcmil	520

#### • Current-Carrying Capacity Curve (Derating Curve) per EN 60512-5-2

Both the design requirements (e.g., dimensions) and the current-carrying capacity of a connector must be checked by the user when selecting connectors.

This information depends on the following factors: conductor size, ambient operating temperature, number of simultaneously loaded poles, internal resistance of the connector, PCB layout, width and thickness of the printed circuits and connector materials.

A current-carrying capacity curve (basic curve) is determined based on the EN 60512-5-2 standard, accounting for the upper temperature limit.

The relationship between current, ambient operating temperature and temperature rise up to the connector's upper temperature limit is illustrated via current-carrying capacity curve (derating curve, reduction factor: 0.8).

The connector must only be operated up to this temperature limit (sum of the self-generated heat and the ambient operating temperature) without being damaged or destroyed during operation.

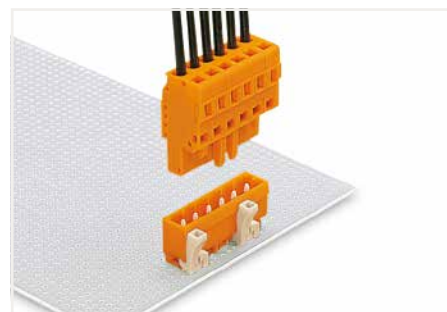
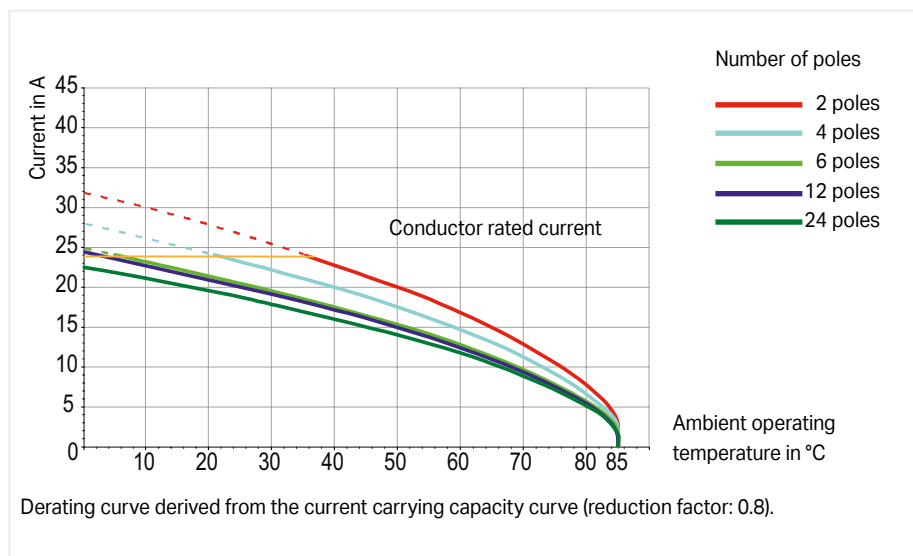
**The nominal current figures given for the WAGO PCB Connectors are based on the maximum number of poles, the maximum conductor cross-section and a maximum temperature rise of 45 K.**

Note: Current-carrying capacity curves merely document the self-generated heat of the connectors and terminal blocks under defined test conditions (conductor length, commoning of solder pins).

Usability of the components in actual applications must be investigated by the user.

Functioning of a current-carrying capacity curve (derating curve) per EN 60512-5-2 is shown by an application using a derating curve for the **MULTI CONNECTION SYSTEM**:

This application requires each pole of a 4-pole connector be subjected to a load of 20 A. Based on the derating curve determined for this pole number with a conductor cross-section of 2.5 mm<sup>2</sup>, it has been determined the maximum ambient operating temperature is 39°C (102.2°F). The current must be reduced at higher ambient operating temperatures, e.g., to 11 A at an ambient operating temperature of 70°C (158°F).



Male header with straight solder pins and female connector with CAGE CLAMP® connection

The non-reduced current-carrying capacity curves (basic curves, reduction factor: 1) can be used when selecting WAGO's PCB terminal blocks!

The nominal current values given are based on a 4-pole PCB terminal strip with a temperature rise of 45 K.



E.g.: 4-pole 2706 Series PCB Terminal Strip

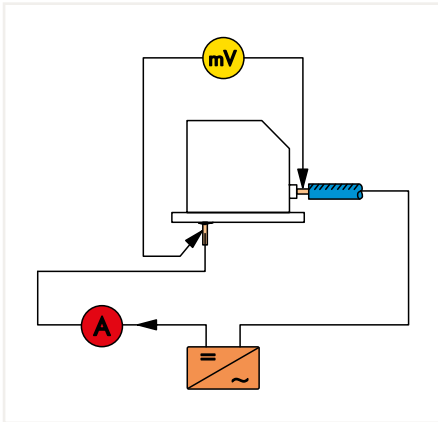


## Tests and Testing Procedures per IEC/EN Standards (continued)

### Electrical Tests (continued)

- Voltage Drop Test per IEC/EN 60947-7-1, IEC/EN 60999-1

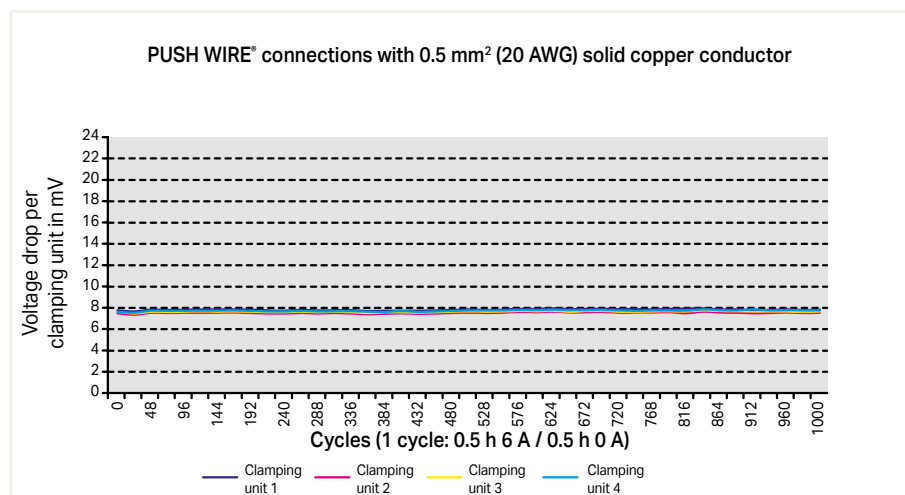
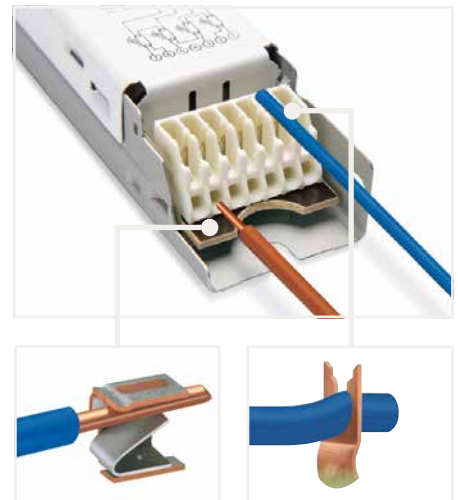
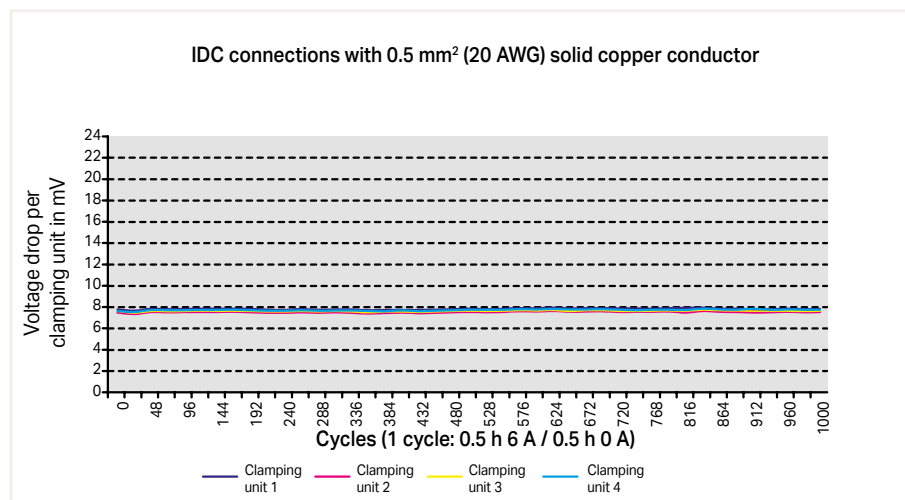
The voltage drop test evaluates clamping point quality under stress such as vibration, temperature change, industrial climate and salt spray, in order to verify that the contact point is gas-tight.



Test arrangement: "Voltage Drop Test"

Example: Current load cycling test result for Combi PCB terminal blocks with IDC and PUSH WIRE® connections

Voltage drop variation over longer periods under current load cycling conditions is shown for 251-3xx Combi PCB Terminal Blocks using solid copper conductors. The diagram shows that the voltage drop is constant, far beyond the 192 cycles required in IEC/EN 60998-2-2.



(The voltage drop was determined at rated current.)

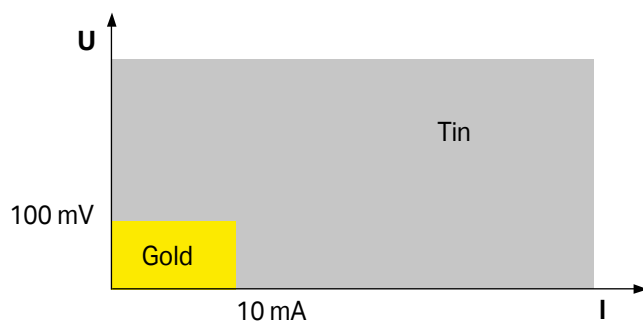
#### • Minimum Current / Specialty Connector Applications

The contact surfaces of WAGO connectors are tin-plated. This surface exhibits excellent conductivity, along with outstanding protection against corrosion. Pollution layer deposits may penetrate this pure tin coating when the contacts are connected, lowering contact resistance.

The following information regarding proper selection of suitable WAGO components should be considered for applications in which connectors are used with minimal current and voltage levels and under special conditions, involving, for example, temperature, aggressive gases, vibration, shock, etc.

Signal corruption may occur in applications with minimal current and voltage levels under the special conditions cited above. In such cases, we recommend using gold-plated contacts. Here, the user must always examine the suitability of the connectors for the application at hand.

The diagram below is based on practical experience.



WAGO also offers connectors with gold-plated contacts upon request.

Fig.: Selection of surface properties for special conditions

## Tests and Testing Procedures per IEC/EN Standards (continued)

### Electrical Tests (continued)

#### • Insulation Parameters per IEC/EN 60664-1

##### Clearances and Creepage Distances

The following generally applies:

The equipment specification contains data for the measurement of clearances and creepage distances, or refers to the data contained in the new revised edition of the basic standard DIN EN 60664-1/VDE 0110-1.

This standard contains new clearances and creepage distances in compliance with insulation coordination requirements. That is, the insulation parameters of equipment are assigned to:

- the anticipated surge voltages,
- the parameters of the protection device against surge voltage and
- the anticipated environmental conditions and the protection measures against pollution.

This standard is based on IEC 60604-1.

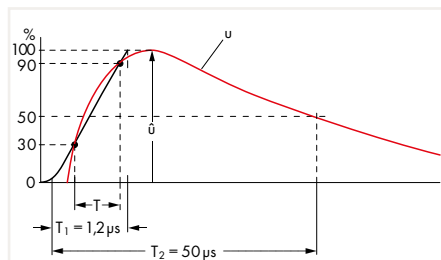
##### Clearances, Rated Surge Voltages, Overvoltage Categories, Pollution Degrees

Surge voltages (Table 1) are a decisive factor in determining clearances.

The basis forms the **overvoltage category**, i.e., the allocation of the equipment to the expected overvoltage, and the **conductor-ground voltage derived from the rated line voltage in installations with a grounded Y (star) point**.

In ungrounded installations, or installations where the conductor is not grounded, the voltage between conductors is applicable in the same way as conductor voltage to ground.

- ❶ Voltage pulse: 1.2/50 µs



per DIN EN 60060-1/VDE 0432-1

##### Overvoltage Categories for Electrical Equipment:

A specific overvoltage category must be defined on the basis of the following, general description:

- Equipment in overvoltage category I is intended to be connected to the fixed electrical installations of a building. Protective means are taken outside the equipment – either in the fixed installation or between the fixed installation and the equipment – to limit transient overvoltages to the specific level.
- Equipment in overvoltage category II is to be connected to the fixed electrical installations of a building.  
Note: Examples of such equipment are household appliances, portable tools and similar loads.
- Equipment in overvoltage category III is part of the fixed electrical installations and other equipment where a higher degree of availability is expected.  
Note: Examples of such equipment are distribution boards, circuit breakers, wiring systems (IEV 826-16-08, including cables, bus bars, junction boxes, switches, socket outlets) in the fixed installation and equipment for industrial use and other equipment, e.g., stationary motors with permanent connection to the fixed installation.
- Equipment in overvoltage category IV is for use in or near the feed-in in electrical building installations upstream of the main distribution board in the direction of the network.  
Note: Examples include electricity meters, primary overcurrent protection devices and ripple control units.

The rated impulse voltage must be selected from Table 1 corresponding to the overvoltage category specified and to the rated voltage of the equipment.

Table F.1: Rated surge voltage for equipment energized directly from the low-voltage mains (DIN EN 60664-1/VDE 0110-1)

- ❶ Voltage curve: 1.2/50 µs per DIN EN 60060-1/VDE 0432-1

Nominal voltage of the supply system <sup>1)</sup> (mains) per IEC 60038 <sup>3)</sup>		Conductor-to-neutral voltage, derived from the nominal AC or DC voltage up to and including:  V	Rated surge voltage <sup>2)</sup>			
			Overvoltage category <sup>4)</sup>			
			I V	II V	III V	IV V
Three-phase V	Single-phase V	50	330	500	800	1500
		100	500	800	1500	2500
	120-240	150 <sup>5)</sup>	800	1500	2500	4000
230/400 277/480		300	1500	2500	4000	6000
400/690		600	2500	4000	6000	8000
1000		1000	4000	6000	8000	12000

<sup>1)</sup> See Annex B for application to existing different low-voltage mains and their nominal voltages.

<sup>2)</sup> Equipment with these rated impulse voltage levels can be used in installations complying with IEC 60364-4-443.

<sup>3)</sup> The / mark indicates a three-phase, 4-wire system. The lower value is the conductor-to-neutral voltage, while the higher value is the conductor-to-conductor voltage. Where only one value is indicated, it refers to three-phase, 3-conductor systems and specifies the conductor-to-conductor voltage.

<sup>4)</sup> See 4.3.3.2.2 for an explanation of the overvoltage categories.

<sup>5)</sup> The nominal voltages for single-phase systems in Japan are 100 V or 100 ... 200 V. The value for the rated impulse voltage is, however, derived from the voltage gaps conductor-to-neutral for a voltage level of 150 V (see Annex B).

The nominal supply voltage and the corresponding rated impulse voltage values apply for grounded and ungrounded circuits.

• Insulation Parameters per IEC/EN 60664-1 (continued)

### Pollution Degrees

Pollution factors are all solid, liquid or gaseous foreign matter which may reduce the dielectric strength or the specific surface resistance. Factors are divided into four classes based on expected environmental conditions:

		Examples of pollution degrees for assigned areas:
Pollution degree 1:	No pollution, or only dry, non-conductive pollution occurs. Pollution has no influence.	Open, unprotected insulated equipment in air-conditioned or clean, dry rooms
Pollution degree 2:	Only non-conductive pollution occurs. Occasional, temporary conductivity caused by condensation can also be expected.	Open, unprotected insulated equipment in occupied areas, shops, laboratories, mechanical workshops and medical rooms.
Pollution degree 3:	Conductive pollution occurs, or dry, non-conductive pollution occurs which will become conductive due to condensation.	Open, unprotected insulated equipment in industrial, business and farming areas ( e.g., unheated rooms, workshops and boiler rooms)
Pollution degree 4:	The pollution generates persistent conductivity caused by conductive dust, rain or wet conditions.	Open, unprotected insulated equipment for outdoor use

### Dimensioning Clearances

See Table F.2 for specifications per DIN EN 60664-1/ VDE 0110, Part 1. Select the minimum clearances in accordance with the rated surge voltages and pollution degrees. To maximize the operating life of the equipment, do not go below these minimum clearances.

Table F.2 contains a list of information for Case A, the inhomogeneous field and for Case B, the homogeneous field. This involves an electric field with essentially constant (Case B) or non-constant (Case A) voltage gradients between the electrodes.

**Equipment with a clearance that is dimensioned per Case A, in other words rated for the most unfavorable case, requires no verification by the impulse voltage test.**

Equipment with a clearance that is dimensioned per Case B, or between A and B, requires verification by the impulse voltage test.

The clearances shown in Table F.2 are applicable for an installation height of up to 2000 m above sea level.

Values for clearances above 2000 m must be multiplied by a high correction factor in accordance with Table A.2.

**Table F.2: Clearances to Withstand Transient Overvoltages**  
DIN EN 60664-1 / VDE 0110-1

Required impulse withstand voltage <sup>1)</sup>	Minimum clearances in air up to 2000 m above sea level					
	Case A (inhomogeneous field, see 3.15)			Case B (homogeneous field, see 3.14)		
	Pollution degree <sup>6)</sup>			Pollution degree <sup>6)</sup>		
	1 mm	2 mm	3 mm	1 mm	2 mm	3 mm
kV						
0.33 <sup>2)</sup>	0.01	0.2 <sup>3)4)</sup>	0.8 <sup>4)</sup>	0.01	0.2 <sup>3)4)</sup>	0.8 <sup>4)</sup>
0.40	0.02			0.02		
0.50 <sup>2)</sup>	0.04			0.04		
0.60	0.06			0.06		
0.80 <sup>2)</sup>	0.10			0.10		
1.0	0.15			0.15		
1.2	0.25	0.25	1.0	0.2	0.3	1.0
1.5 <sup>2)</sup>	0.5	0.5		0.3		
2.0	1.0	1.0		0.45	0.45	
2.5 <sup>2)</sup>	1.5	1.5	1.5	0.60	0.60	1.5
3.0	2.0	2.0	2.0	0.80	0.80	
4.0 <sup>2)</sup>	3.0	3.0	3.0	1.2	1.2	
5.0	4.0	4.0	4.0	1.5	1.5	1.5
6.0 <sup>2)</sup>	5.5	5.5	5.5	2.0	2.0	2.0
8.0 <sup>2)</sup>	8.0	8.0	8.0	3.0	3.0	3.0
10	11	11	11	3.5	3.5	3.5
12 <sup>2)</sup>	14	14	14	4.5	4.5	4.5
15	18	18	18	5.5	5.5	5.5
20	25	25	25	8.0	8.0	8.0
25	33	33	33	10	10	10
30	40	40	40	12.5	12.5	12.5
40	60	60	60	17	17	17
50	75	75	75	22	22	22
60	90	90	90	27	27	27
80	130	130	130	35	35	35
100	170	170	170	45	45	45

<sup>1)</sup> This voltage is

- Functional insulation: the maximum impulse voltage expected to occur across the clearance (see 5.1.5)
- Basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6): the rated impulse voltage for the equipment;
- Other basic insulation (see 4.3.3.4.2): the highest impulse voltage that can occur in the circuit for reinforced insulation, see 5.1.6.

<sup>2)</sup> Preferred values specified in 4.2.3

<sup>3)</sup> For printed wiring material, the values for pollution degree 1 apply, except that the value must not be less than 0.04 mm, as specified in Table F.4.

<sup>4)</sup> The minimum clearances given for pollution degree 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

<sup>5)</sup> For parts or circuit within equipment subject to surge voltages based on 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values based on 4.2.3.

<sup>6)</sup> The dimensions for pollution degree 4 are as specified for pollution degree 3, except that the minimum clearance is 1.6 mm.

## Tests and Testing Procedures per IEC/EN Standards (continued)

### Electrical Tests (continued)

**Table A.2:**  
**Altitude Correction Factors**  
(DIN EN 60664-1/VDE 0110-1)

Altitude m	Standard air pressure kPa	Multiplier for clearances
2000	80	1
3000	70	1.14
4000	62	1.29
5000	54	1.48
6000	47	1.7
7000	41	1.95
8000	35.5	2.25
9000	30.5	2.62
10000	26.5	3.02
15000	12	6.67
20000	5.5	14.5



### Creepage Distances, Rated Voltages, Material Groups

Criteria for dimensioning creepage distances are the rated voltages, pollution degrees and material groups.

The pollution degrees specified for the clearances, and its quoted allocation to locations, is also applicable for creepage distances.

Tables F.3 a and F.3 b of DIN EN 60664-1/VDE 0110-1 contain the rated voltages that have to be considered for dimensioning the minimum creepage distances.

**Table F.3a: Single-Phase, 3- or 2-Wire, AC or DC Systems**

Nominal voltage of the power supply system (mains)*  V	Voltages for Table F.4	
	For insulation conductor-to-conductor <sup>1)</sup>	For insulation conductor-to-ground <sup>1)</sup>
	All systems  V	Three-conductor systems, center-point grounded  V
12.5	12.5	
24 25	25	
30	32	
42 48 50**	50	
60	63	
30 - 60	63	32
100**	100	
110 120	125	
150**	160	
200	200	
110 - 200	200	100
220	250	
110 - 220 120 - 240	250	
300**	320	
220 - 440	500	250
600**	630	
480 - 960	1000	500
1000**	1000	


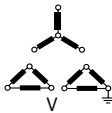
<sup>1)</sup> Conductor-to-ground insulation level for non-grounded or impedance-grounded systems equals that for conductor-to-conductor, as the operating voltage to ground of any line can, in practice, approach full conductor-to-conductor voltage. This is because the actual voltage to ground is determined by the insulation resistance and capacitive reactance of each conductor to ground; thus, low (but acceptable) insulation resistance of one line can in effect ground it and raise the other two to full conductor-to-conductor voltage to ground.

\*For the relationship to rated voltage, see 4.3.2.

\*\*These values correspond to the values given in Table F.1.

• Insulation Parameters per IEC/EN 60664-1 (continued)

Table F.3b: Single-Phase, 4- or 3-Conductor AC Systems

Nominal voltage of the power supply system (mains)*	Voltages for Table F.4		
	For insulation conductor-to-conductor1)	For insulation conductor-to-ground1)	
	All systems	Three-phase, 4-conductor systems with grounded neutral conductor <sup>2)</sup>	Three-phase, 3-conductor systems, non-grounded <sup>1)</sup> or grounded conductor
V	V	 V	 V
60	63	32	63
110 120 127	125	80	125
150**	160		160
200	200		200
208	200	125	200
220 230 240	250	160	250
300**	320		320
380 400 415	400	250	400
440	500	250	500
480 500	500	320	500
575	630	400	630
600**	630		630
660 690	630	400	630
720 830	800	500	800
960	1000	630	1000
1000**	1000		1000

<sup>1)</sup> Conductor-to-ground insulation level for non-grounded or impedance-grounded systems equals that for conductor-to-conductor, as the operating voltage to ground of any line can, in practice, approach full conductor-to-conductor voltage. This is because the actual voltage to ground is determined by the insulation resistance and capacitive reactance of each conductor to ground; thus, low (but acceptable) insulation resistance of one line can in effect ground it and raise the other two to full conductor-to-conductor voltage to ground.

<sup>2)</sup> For equipment used on both three-phase, 4-conductor and three-phase, 3-conductor systems, grounded and non-grounded, use only the values for 3-conductor systems.

\*For the relationship to rated voltage, see 4.3.2.

\*\*These values correspond to the values given in Table F.1.

### Material Groups

Insulation materials are classified into four groups according to their Comparative Tracking Index (CTI) as follows:

Material group I:  $600 \leq \text{CTI}$   
 Material group II:  $400 \leq \text{CTI} < 600$   
 Material group III a:  $175 \leq \text{CTI} < 400$   
 Material group III b:  $100 \leq \text{CTI} < 175$

The CTI values above refer to values obtained in accordance with DIN EN 60664-1/VDE 0110-1 on samples specially made for this purpose and tested with Solution A.



## Tests and Testing Procedures per IEC/EN Standards (continued)

### Electrical Tests (continued)

Table F.4: Creepage Distances to Avoid Failure due to Tracking (Excerpt)

DIN EN 60664-1 / VDE 0110-1

Voltage <sup>1)</sup> (RMS)	Minimum Creepage Distances								
	Printed Circuits		Pollution Degree						
	Pollution Degree								
	1 All Material Groups	2 All Mat. Gr. except IIIb	1 All Material Groups	2 Material Group I	2 Material Group II	2 Material Group III	3 Material Group I	3 Material Group II	3 Material Group III <sup>2)</sup>
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
10	0.025	0.040	0.080	0.400	0.400	0.400	1.000	1.000	1.000
12.5	0.025	0.040	0.090	0.420	0.420	0.420	1.050	1.050	1.050
16	0.025	0.040	0.100	0.450	0.450	0.450	1.100	1.100	1.100
20	0.025	0.040	0.110	0.480	0.480	0.480	1.200	1.200	1.200
25	0.025	0.040	0.125	0.500	0.500	0.500	1.250	1.250	1.250
32	0.025	0.040	0.14	0.53	0.53	0.53	1.30	1.30	1.30
40	0.025	0.040	0.16	0.56	0.80	1.10	1.40	1.60	1.80
50	0.025	0.040	0.18	0.60	0.85	1.20	1.50	1.70	1.90
63	0.040	0.063	0.20	0.63	0.90	1.25	1.60	1.80	2.00
80	0.063	0.100	0.22	0.67	0.95	1.30	1.70	1.90	2.10
100	0.100	0.160	0.25	0.71	1.00	1.40	1.80	2.00	2.20
125	0.160	0.250	0.28	0.75	1.05	1.50	1.90	2.10	2.40
160	0.250	0.400	0.32	0.80	1.10	1.60	2.00	2.20	2.50
200	0.400	0.630	0.42	1.00	1.40	2.00	2.50	2.80	3.20
250	0.560	1.00	0.56	1.25	1.80	2.50	3.20	3.60	4.00
320	0.75	1.60	0.75	1.60	2.20	3.20	4.00	4.50	5.00
400	1.0	2.0	1.0	2.0	2.8	4.0	5.0	5.6	6.3
500	1.3	2.5	1.3	2.5	3.6	5.0	6.3	7.1	8.0 (7.9) <sub>4)</sub>
630	1.8	3.2	1.8	3.2	4.5	6.3	8.0 (7.9) <sub>4)</sub>	9.0 (8.4) <sub>4)</sub>	10.0 (9.0) <sub>4)</sub>
800	2.4	4.0	2.4	4.0	5.6	8.0	10.0 (9.0) <sub>4)</sub>	11.0 (9.6) <sub>4)</sub>	12.5 (10.2) <sub>4)</sub>
1000	3.2	5.0	3.2	5.0	7.1	10.0	12.5 (10.2) <sub>4)</sub>	14.0 (11.2) <sub>4)</sub>	16.0 (12.8) <sub>4)</sub>
1250			4.2	6.3	9.0	12.5	16.0 (12.8) <sub>4)</sub>	18.0 (14.4) <sub>4)</sub>	20.0 (16.0) <sub>4)</sub>
1600			5.6	8.0	11.0	16.0	20.0 (16.0) <sub>4)</sub>	22.0 (17.6) <sub>4)</sub>	25.0 (20.0) <sub>4)</sub>
2000			7.5	10.0	14.0	20.0	25.0 (20.0) <sub>4)</sub>	28.0 (22.4) <sub>4)</sub>	32.0 (25.6) <sub>4)</sub>
2500			10.0	12.5	18.0	25.0	32.0 (25.6) <sub>4)</sub>	36.0 (28.8) <sub>4)</sub>	40.0 (32.0) <sub>4)</sub>
3200			12.5	16.0	22.0	32.0	40.0 (32.0) <sub>4)</sub>	45.0 (36.0) <sub>4)</sub>	50.0 (40.0) <sub>4)</sub>
4000			16.0	20.0	28.0	40.0	50.0 (40.0) <sub>4)</sub>	56.0 (44.8) <sub>4)</sub>	63.0 (50.4) <sub>4)</sub>
5000			20.0	25.0	36.0	50.0	63.0 (50.4) <sub>4)</sub>	71.0 (56.8) <sub>4)</sub>	80.0 (64.0) <sub>4)</sub>
6300			25.0	32.0	45.0	63.0	80.0 (64.0) <sub>4)</sub>	90.0 (72.0) <sub>4)</sub>	100.0 (80.0) <sub>4)</sub>
8000			32.0	40.0	56.0	80.0	100.0 (80) <sub>4)</sub>	110.0 (88.0) <sub>4)</sub>	125.0 (100.0) <sub>4)</sub>
10000			40.0	50.0	71.0	100.0	125.0 (100.0) <sub>4)</sub>	140.0 (112.0) <sub>4)</sub>	160.0 (128.0) <sub>4)</sub>
12500			50.0 <sub>3)</sub>	63.0 <sub>3)</sub>	90.0 <sub>3)</sub>	125.0 <sub>3)</sub>			
16000			63.0 <sub>3)</sub>	80.0 <sub>3)</sub>	110.0 <sub>3)</sub>	160.0 <sub>3)</sub>			
20000			80.0 <sub>3)</sub>	100.0 <sub>3)</sub>	140.0 <sub>3)</sub>	200.0 <sub>3)</sub>			
25000			100.0 <sub>3)</sub>	125.0 <sub>3)</sub>	180.0 <sub>3)</sub>	250.0 <sub>3)</sub>			
32000			125.0 <sub>3)</sub>	160.0 <sub>3)</sub>	220.0 <sub>3)</sub>	320.0 <sub>3)</sub>			
40000			160.0 <sub>3)</sub>	200.0 <sub>3)</sub>	280.0 <sub>3)</sub>	400.0 <sub>3)</sub>			
50000			200.0 <sub>3)</sub>	250.0 <sub>3)</sub>	360.0 <sub>3)</sub>	500.0 <sub>3)</sub>			
63000			250.0 <sub>3)</sub>	320.0 <sub>3)</sub>	450.0 <sub>3)</sub>	600.0 <sub>3)</sub>			

<sup>1)</sup> This voltage is for:

- functional insulation: the working voltage
- Basic and supplementary insulation of the circuit energized directly from the mains (see 4.3.2.2.1): for the voltage rationalized through Table F.3a or F.3b, based on the rated voltage of the equipment, or the rated insulation voltage
- Basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2): the highest rms voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most taxing combination of operation conditions within equipment rating

<sup>2)</sup> Material group IIIb is not recommended for applications in pollution degree 3 above 630 V.<sup>3)</sup> Provisional data based on extrapolation. Technical committees who have other information based on experience may use their dimensions.<sup>4)</sup> The values in brackets must only be applied for reducing creepage distances if a rib is used (see 5.2.5).

The high degree of accuracy of the creepage distances given in the table does not imply that the measuring accuracy must be of the same quality.

• Insulation Parameters per IEC/EN 60664-1 (continued)

Depending on the intended use, WAGO's terminal blocks, splicing and pluggable connectors are suitable for pollution degrees 2 or 3 and for overvoltage categories II or III.  
The rated voltages of WAGO's PCB terminal blocks and connectors are based on pollution degree 2 and overvoltage category III in per IEC/EN 60664-1 (insulation parameters).

Example:

**WAGO PCB Terminal Strips, 236 Series**  
**(Pin spacing 5/5.08 mm / 0.197/0.2 in.)**

320 V/4kV/2

Rated voltage	320 V
Rated surge voltage	4kV
Pollution degree	2
Overvoltage category	III

The specific values for pollution degree 3 and overvoltage category II are also given in the technical data.

The clearances and creepage distances required for defined voltage values in Table 3 of IEC/EN 60998-1 deviate somewhat from the requirements specified in the insulation parameters.

**Table 3: Clearances and Creepage Distances**  
(IEC/EN 60998-1)

Rated Insulation Voltage	Creepage Distances, Clearances
V	mm
≤ 130	1.5
> 130 and ≤ 250	3.0
> 250 and ≤ 450	4.0
> 450 and ≤ 750	6.0
> 750	8.0

It must be determined in the end application which clearance and creepage distance requirements are to be observed for approval.

## Tests and Testing Procedures per IEC/EN Standards (continued)

### Electrical Tests (continued)

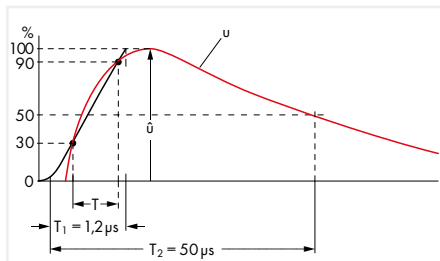
#### • Power-Frequency Withstand Voltage Test per IEC/EN 60998-1

This testing procedure verifies creepage distances. Creepage distances, i.e., the distances of creeping currents, are caused by conductive impurities on the surface of the insulation housing. Apart from the amount of impurities to which a terminal block is subjected, for example, the plastic material and housing design are also involved in generating creeping currents. The insulation material of the housing may be carbonized by a creeping current, which increases conductivity even more.

The specimen is tested using a power-frequency withstand voltage for a short time. For example, a PCB terminal block designed to operate at 320 V nominal voltage is usually tested using 2500 V alternating voltage for one minute. The test is passed if no flashovers or breakdowns have occurred.

#### • Rated Impulse Withstand Voltage Test per IEC/EN 60664-1

This test verifies the clearances of a product. In simplified terms, a clearance is the distance between two poles of a terminal block. If this distance is too small, voltage peaks may cause flashovers or breakdowns. The arrangement of the rated impulse withstand voltage test is identical to that of the power frequency withstand voltage test; the test voltages, however, are comparatively higher and the testing times shorter, e.g., 7.385 kV over 50  $\mu$ s (see figure).



Voltage pulse: measurement curve (red) and auxiliary curve (black) for calculating the rate of rise of the pulse and the resulting (virtual) peak of the curve.

T Time interval for calculating the rate of rise  
 T1 Front time (duration between start of impulse and reaching the peak)  
 T2 Total pulse duration

The test values are the values at sea level as specified in the relevant test specification.

The values indicated in the catalog correspond to an altitude of 2000 m.

The test is passed if no flashovers or breakdowns have occurred.

#### • IP Ratings for Electrical Equipment per IEC/EN 60529

Alphanumeric Nomenclature for Type of Protection			
Code letters IP	Protection against accidental contact and against the penetration of foreign objects or water	IP (Ingress Protection) = International degree of protection	
First code number 0 to 6	Indicates the degree of protection against accidental contact and the penetration of foreign objects.	If indicating the degree of protection requires only one digit, the other (second) digit must be substituted for with an X.	
Second code number 0 to 8	Indicates the degree of protection against water penetration.		
First code number:		Second code number:	
IP0X	No protection against accidental contact or the penetration of foreign objects	IPX0	No protection against water
IP1X	Protection against foreign objects > 50 mm	IPX1	Protection against vertically falling water
IP2X	Protection against foreign objects > 12 mm (e.g., finger)	IPX2	Protection against diagonally dripping water (15° angle)
IP3X	Protection against foreign objects > 2.5 mm	IPX3	Protection against water spray
IP4X	Protection against foreign objects > 1 mm	IPX4	Protection against water spray
IP5X	Protection against damaging dust deposits	IPX5	Protection against water jet, e.g., from a nozzle
IP6X	Protection against dust penetration	IPX6	Protection against flooding
		IPX7	Protection against temporary immersion
		IPX8	Protection against continuous immersion
		IPX9	Protection against high-pressure and high-temperature water jets

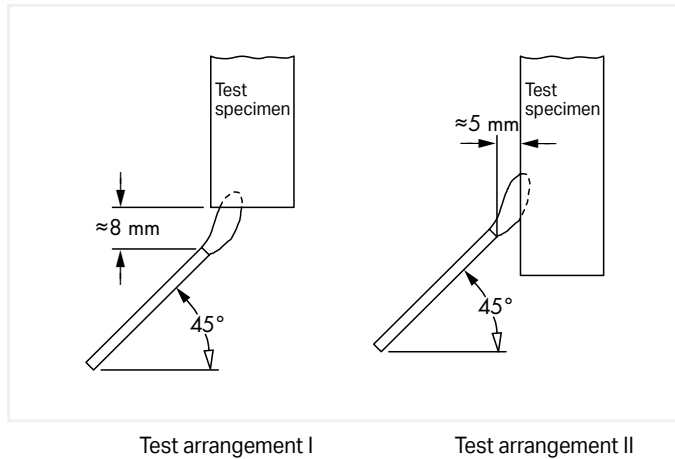
IP vs. NEMA	
IP Code	NEMA
10	1
11	2
54	3
14	3R
54	3S
55	4&4x
52	5
67	6&6P
52	12&12K
54	13

## Material Tests

All WAGO products meet requirements for the following material tests:

- Needle Flame Test per IEC/EN 60695-11-5

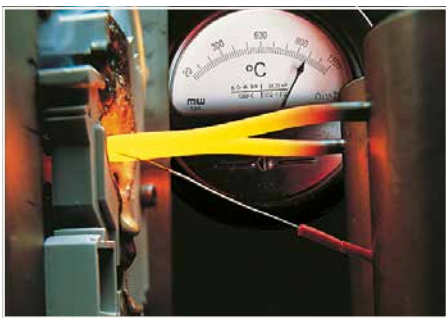
This test simulates flames that may arise under certain conditions (e.g. fault current over a creepage distance, overloading of parts or components). Nearby parts can also be affected by such flames. Not only the ignition of the test specimen resulting from an intrinsic defect is tested, but also its behavior when other parts ignite.



Flames must not be fuelled by the insulation materials used, thus creating a larger fire. The test specimen is exposed to a standard gas flame during a defined time period (e.g., ten seconds). After the test flame has been removed, the specimen must self-extinguish within 30 seconds. Furthermore, a layer of tissue paper located beneath the specimen must not be ignited by glowing particles falling from the specimen.

- Glow-Wire Test per IEC/EN 60998-1, IEC/EN 60695-2-11

In the event of failure, a high current may cause a conductor to glow.



However, the glowing conductor must not cause ignition of the product involved (e.g., a rail-mount terminal block). For the glow-wire test, the tip of the glow-wire is pressed against a surface of the test specimen (see picture). The position of the test specimen, surface to be tested, test duration and glow-wire temperature (e.g., 960°C/1760°F over 30 seconds, or 850°C/1562°F over 5 seconds) are specified in the standards. The specimen must be positioned such that the tip of the glow-wire acts on the surface section of the specimen (vertical surface of the specimen) that is most likely to be exposed to thermal loading during normal use.

As the highest temperature in the event of a fault is anticipated at the contact insert/wire connection, the tip of the glow-wire must act upon the section of the insulation housing that is the closest to this contact point. The test is passed if there are no visible flames or permanent glowing, or if flames or glowing extinguish within 30 seconds after removal of the glow-wire. Furthermore, a layer of tissue paper located beneath the specimen must not be ignited by glowing particles falling from the specimen.

## Tests and Testing Procedures per IEC/EN Standards (continued)

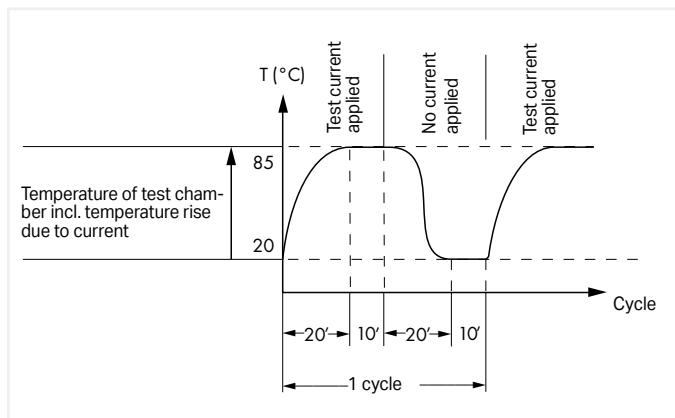
### Environmental Tests

The following tests show how a product reacts when exposed to an aggressive environment. Climatic chambers simulate standard atmospheres that could impact long-term constancy of clamping units.

All WAGO products meet requirements for the following environmental tests:

- Temperature Cycling Test per IEC/EN 60947-7-1, IEC/EN 60998-2-2

This test shows the change of voltage drop over longer periods under temperature cycling conditions. The test procedure usually consists of 192 temperature cycles, for example, each cycle having a duration of 60 minutes (see diagram).



The rated current is applied to the test specimen during temperature rise and when the temperature has reached its maximum value; during the second half of the cycle, the current is zero. Voltage drop is measured every 24 cycles and must not exceed a maximum value or vary greatly. The voltage drop measured at the end of the 192nd cycle must not exceed 1.5 times the value measured after the 24th cycle. After the test, an inspection must show no changes that would impair further use of the product.

- Industrial Atmospheres per EN ISO 6988, IEC/EN 60068-2-42, IEC/EN 60068-2-60

Sulphur and its combustion products are particularly aggressive pollutants commonly found in industrial environments. A test procedure simulating such corrosive conditions consists of exposing a test specimen to water condensation in variable atmospheres containing sulphur dioxide.



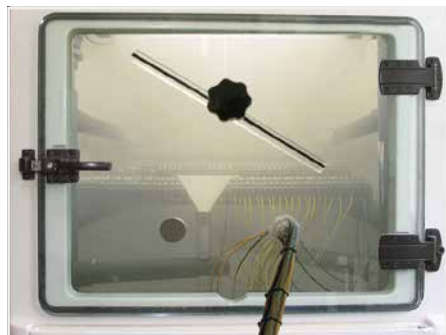
A saturated atmosphere is first created in a climatic chamber by heating an aqueous sulphur dioxide solution. After less than half an hour, the test specimen is fully saturated by the condensing vapors and exposed to this atmosphere for eight hours.

After exposure to a humid atmosphere, the test specimen is subjected to dry and cooler conditions at room temperature for 16 hours. Depending on the test severity, the specimen is exposed to both these conditions several times. The gas-tightness of the clamping unit is verified by a voltage drop test.

In other test procedures, products are exposed to a dry corrosive gas atmosphere containing sulfide, nitrogen and sulfur oxides or chloride gas. These tests can be performed over a period of four to 21 days.

- Salt Spray Test per IEC/EN 60068-2-11; DNV GL, LR (Marine Applications)

This test is similar to the test performed in water condensation alternating atmospheres, except that instead of industrial atmospheres, salt mist conditions will be simulated in a heated test chamber (see picture).



Depending on the test procedure being used, the test specimen is sprayed with salt mist for 16 hours up to 672 hours (4 weeks).

Salt spray tests are widely used, especially for marine approvals.

However, this test is performed differently than the test procedures described previously for general applications:

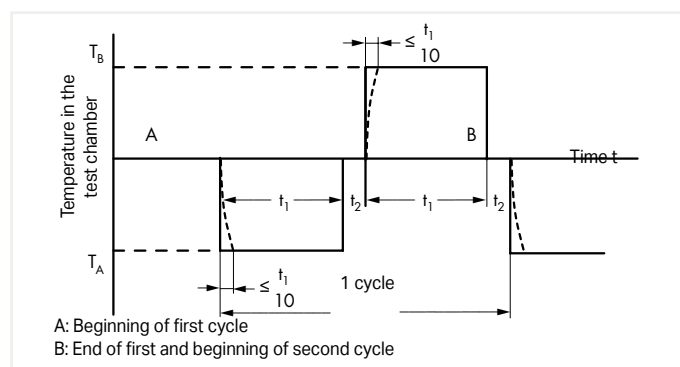
During a typical test, the test specimen is sprayed with a salt solution for two hours and is then stored for seven days in an atmosphere with a relative humidity between 90 and 95%. This procedure is repeated four times.

Voltage drop measurements are used as an evaluation criterion.

- Quick Change of Temperature per IEC/EN 60068-2-14

Without air-conditioning, distribution panels and terminal boxes are exposed to seasonal (and ever-changing) temperature extremes – especially on the open field side.

In process technology, for example, a terminal block is exposed to even quicker changes in temperature.



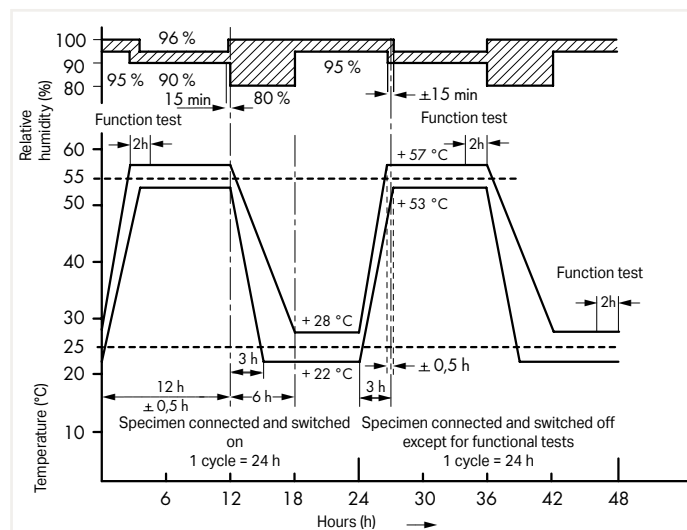
To simulate such conditions, the test specimen is exposed to repeated temperature changes, for example, between TA -40°C (-104°F) and TB +70°C (+158°F).

The dwell time  $t_1$  depends on the thermal capacity of the test specimen and should be between maximum of 3 hours and minimum of 10 minutes and the transition time  $t_2$  2 ... 3 min., 20 ... 30 sec. or less than 10 seconds.

The mechanical and electrical properties of the product are checked at the end of the test.

- Damp Heat, Cyclic (12 + 12 Hour Cycle) per IEC/EN 60068-2-30, DNV GL, LR (Marine Applications)

This test determines the suitability of electrical equipment for use and storage under conditions of high relative humidity when combined with cyclic temperature changes and, in general, producing condensation on the surface of the specimen.



In addition to the salt spray tests, the damp heat test is also used for marine approvals.

For this test, the specimens are subjected to temperatures varying cyclically between +25°C (+77°F) and +55°C (+131°F) with a relative humidity of 95% (for tolerances see figure).

Functional tests are performed at defined times during the storage period.

The mechanical and electrical properties of the product are checked at the end of the test.



## UL Specifications – Underwriters Laboratories, USA

WAGO terminal blocks and connectors are tested by Underwriters Laboratories Inc. according to one or more of the relevant following UL standards:

- PCB terminal strips (e.g., 236, 745 Series) are approved as non-stand-alone components per UL 1059 in connection with UL 486E.
  - UL 1059 Standard for terminal blocks
  - UL 486 E Equipment wiring terminals for use with aluminum and/or copper conductors
- The *MULTI CONNECTION SYSTEM "MCS-MIDI"* is approved as terminal blocks per UL 1059 standard in connection with UL 486 E. It is therefore defined for "field and factory wiring" at 300 V.
- It is also approved as connectors for use in data, signal, control and power applications per UL 1977 for factory wiring at 600 V (i.e., the clamping unit must be wired under controlled manufacturing conditions).
  - UL 1977 Component connectors for use in data, signal, control and power applications
- Für Klemmen Ex e II trifft UL 60079-7 zu.
- Insulation materials are tested for flammability and performance in accordance with UL 94.
  - UL 60079-7 Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety
  - UL 94 Tests for flammability of plastic materials for parts in devices and appliances

Tests and Testing Procedures per UL Standards

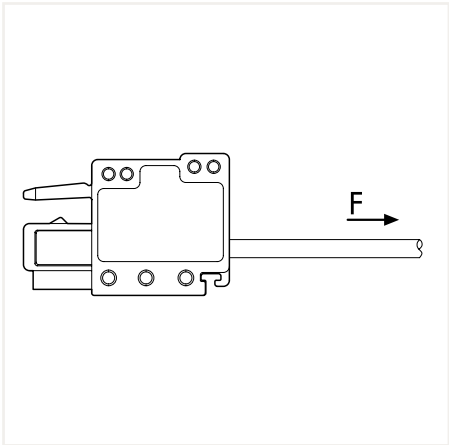
All WAGO products meet requirements for the following tests:

- Pull-Out Test per UL 1059, UL 486 E

In this test, the connected conductors are subjected to the appropriate pull-out forces specified in the following table without jerking for a period of one minute.

Conductor Size		Pull-Out Force, Pounds (N)			
AWG or		UL 486 E, Table 22			
kcmil	(mm²)	Copper		Aluminum	
30	(0.05)	0.5	(2.2)	-	-
28	(0.08)	1	(4.5)	-	-
26	(0.13)	2	(8.9)	-	-
24	(0.20)	3	(13.4)	-	-
22	(0.32)	4.5	(20)	-	-
20	(0.52)	6.75	(30)	-	-
18	(0.82)	6.75	(30)	-	-
16	(1.3)	9	(40)	-	-
14	(2.1)	11.5	(50)	-	-
12	(3.3)	13.5	(60)	10	(44)
10	(5.3)	18	(80)	10	(44)
8	(8.4)	20.5	(90)	10	(44)
6	(13.3)	21	(94)	28	(124)
4	(21.2)	30	(133)	36	(160)
3	(26.7)	35	(156)	42	(187)
2	(33.6)	42	(186)	50	(222)
1	(42.4)	53	(236)	61	(271)
1/0	(53.5)	64	(285)	72	(320)
2/0	(67.4)	64	(285)	78	(347)
3/0	(85.0)	79	(351)	97	(432)
4/0	(107)	96	(427)	116	(516)
250	(127)	96	(427)	116	(516)
300	(156)	99	(441)	116	(516)

Test Arrangement per  
UL 1059, UL 486 E:



## UL Specifications – Underwriters Laboratories, USA (continued)

### Tests and Testing Procedures per UL Standards (continued)

#### • Heat Cycling Test per UL 1059, UL 486 E

Tests performed:

#### UL 1059

Test performed with maximum rated cross-section

Test current: 150% of maximum rated current

84 cycles of: 3 1/2 h ON / 1/2 h OFF

The temperature rise is measured after the first and the 84th cycle.

The temperature rise must not exceed 5°C (41°F) after the 84th cycle, compared to the temperature measured after the first cycle.

#### per UL 486 E (equipment wiring terminals)

Test performed with maximum rated cross-section

Test current: Increased test current per UL 486 E, Table 4

500 cycles of: 1 h ON / 1 h OFF

1 1/2 h ON / 1 1/2 h OFF

(from 4/0 AWG up to 400 kcmil per UL 486 E)

The temperature rises at the terminal blocks and control conductors are measured and recorded after: 1, 25, 50, 75, 100, 125, 175, 225, 275, 350, 425 and 500 cycles.

The temperature rise must not exceed 125°C (257°F) and the stability factor "S" must not exceed ± 10.

Conductor Size		Test Current for Copper Conductors in A			
		UL 486 E, Table 4			
AWG or kcmil	(mm <sup>2</sup> )	Assigned max. Ampere Rating <sup>b</sup>	Static Heating <sup>a,c,g</sup>	Heat Cycling Temperature Rating <sup>a</sup>	
				75 °C <sup>d,g</sup>	90 °C <sup>e,g</sup>
30	(0.05)	-	3	3.5	4
28	(0.08)	-	3.5	4	5
26	(0.13)	-	5.5	6	8
24	(0.20)	-	7	8	10
22	(0.32)	-	9	12	13
20	(0.52)	-	12	16	17
18	(0.82)	-	17	19	24
16	(1.3)	-	18	20	31
14	(2.1)	15	[20] 30	[22] 33	[27] 40
12	(3.3)	20	[25] 35	[28] 39	[40] 54
10	(5.3)	30	[40] 50	[45] 56	[60] 75
8	(8.4)	50	70	80	100
6	(13.3)	65	95	105	131
4	(21.2)	85	125	140	175
3	(26.7)	100	145	165	205
2	(33.6)	115	170	190	240
1	(42.4)	130	195	220	275
1/0	(53.5)	150	230	255	320
2/0	(67.4)	175	265	300	370
3/0	(85.0)	200	310	345	435
4/0	(107)	230	360	405	505
250	(127)	255	405	445	565
300	(152)	285	445	500	625

<sup>a</sup> See Section 7.2, 8.2 and 9.2 (UL 486 E)

<sup>b</sup> Values are for 75°C (167°F), not more than 3 conductors in raceway or cable ampacities, National Electric Code, ANSI/NFPA 70.

<sup>c</sup> Values are for 75°C (167°F) single conductors in free air ampacities, National Electric Code, ANSI/NFPA 70.

<sup>d</sup> Values are approximately 112% of the static heating test currents.

<sup>e</sup> Values for 8 AWG and larger conductors are approximately 140% of the static heating test currents.

<sup>f</sup> See Section 9.2.4

<sup>g</sup> Values in parentheses apply to connectors with assigned ampere ratings.

- Conditioning – Temperature-Rise Rest per UL 1059

Tests performed:

**UL 1059** (terminal blocks)

Conditioning:

The clamping units are pre-wired/pre-inserted nine times using a conductor with maximum rated cross-section. On the 10th time, a new conductor is connected.

After this, a static heating test is performed.

Static Heating Test:

Test current: Terminal block rated current

Test duration: 30 days

Max. permissible

temperature rise: 30 °C

## UL Specifications – Underwriters Laboratories, USA (continued)

### Tests and Testing Procedures per UL Standards (continued)

#### • Insulation Parameters per UL 1059

The table below shows the potential involved and the corresponding clearances and creepage distances required in different applications.

**Minimum Acceptable Spacing for Terminal Blocks, UL Standard 1059, Table 8.1:**

Use group	Application	Potential Involved in Volts	Spacing in inches (mm) between uninsulated live parts of opposite polarity, uninsulated live parts and uninsulated grounded parts other than the enclosure	
			Through Air	Over Surfaces
S.	Dead-front switchboards, panelboards, service equipment and similar applications	51 ... 150	1/2 (12.7)	3/4 (19.1)
		151 ... 300	3/4 (19.1)	1...1/4 (31.8)
		301 ... 600	1 (25.4)	2 (50.8)
B.	Commercial appliances, including business equipment, electronic data processing equipment and similar applications	51 ... 150	1/16 <sup>a</sup> (1.6) <sup>a</sup>	1/16 <sup>a</sup> (1.6) <sup>a</sup>
		151 ... 300	3/32 <sup>a</sup> (2.4) <sup>a</sup>	3/32 <sup>a</sup> (2.4) <sup>a</sup>
		301 ... 600	3/8 (9.5)	1/2 (12.7)
C.	Industrial, general	51 ... 150	1/8 <sup>a</sup> (3.2) <sup>a</sup>	1/4 (6.4)
		151 ... 300	1/4 (6.4)	3/8 (9.5)
		301 ... 600	3/8 (9.5)	1/2 (12.7)
D.	Industrial, devices having limited ratings <sup>b</sup>	51 ... 300	1/16 <sup>a</sup> (1.6) <sup>a</sup>	1/8 <sup>a</sup> (3.2) <sup>a</sup>
		301 ... 600	3/16 <sup>a</sup> (4.8) <sup>a</sup>	3/8 (9.5)
E.	Terminal blocks rated 601 ... 1500 V <sup>c</sup>	601 ... 1000	0,55 (14.0)	0,85 (21.6)
		1001 ... 1500	0,70 (17.8)	1,20 (30.5)

#### Notes

1 A slot, groove, or similar, 0.013 inch (0.33 mm) wide or less in the contour of the insulating material is to be disregarded.

2 Air space of 0.33 mm or less between a live part and an insulating surface is to be disregarded for the purpose of measuring over surface spacing.

<sup>a</sup> The spacing between terminal blocks of opposite polarity and the spacing between a terminal block and a grounded dead metal part shall not be less than 1/4 inch (6.4 mm) if short-circuiting or grounding of such terminal blocks may result from protruding wire strands.

<sup>b</sup> See Section 8.5 (UL 1059)  
The spacing values indicated in sub-paragraph D in Table 8.1 are applicable to a terminal block for use only in or with industrial control equipment where the load on any single circuit of the terminal block does not exceed 15 A at 51 ... 150 V, 10 A at 151 ... 300 V, 5 A at 301 ... 600 V or the maximum ampere rating, whichever is less.

<sup>c</sup> Applies only to terminal blocks investigated to Part II of this standard. See Section 22.1 (UL 1059).

#### • Flammability Test per UL 94

This test provides an indication of the material's ability to extinguish a flame, once ignited.

Several ratings can be applied, based on the rated of burning, time to extinguish, ability to resist dripping, and after-glow extinguishing time. Each material tested may receive several ratings, depending on the wall thickness.

UL 94 rating categories:

#### V2

- Specimen mounted vertically
- Burning stops within 30 seconds after the flame is removed
- Flaming drips allowed
- After-glow extinguishes within 60 seconds max.

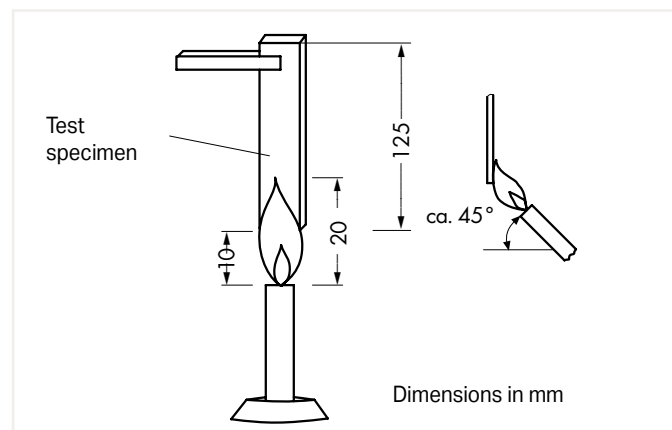
#### V1

- Specimen mounted vertically
- Burning stops within 30 seconds after the flame is removed
- No flaming drips allowed
- After-glow extinguishes within 60 seconds max.

#### V0

- Specimen mounted vertically
- Burning stops within 10 seconds after the flame is removed
- No flaming drips allowed
- After-glow extinguishes within 30 seconds max.

During the test, a 3/4 inch (20 ± 1 mm) flame is applied for two 10-second intervals to the specified bar specimen held vertically.



## Terminating Aluminum Conductors

WAGO "Alu-Plus" Contact Paste also allows WAGO spring clamp terminal blocks to properly terminate solid aluminum conductors up to 4 mm<sup>2</sup>/12 AWG. ❶

"Alu-Plus" Contact Paste:

- Prevents fresh oxidation at the clamping point.
- Prevents electrolytic corrosion between aluminum and copper conductors.
- Provides long-term protection against corrosion.

Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, aluminum conductors must first be cleaned and then immediately be inserted into the clamping units filled with WAGO "Alu-Plus" Contact Paste.

It is also possible to apply WAGO "Alu-Plus" additionally on the whole surface of the aluminum conductor before termination.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors:

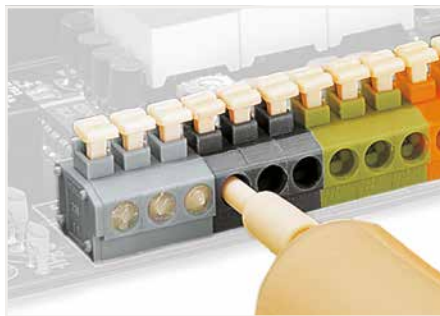
2.5 mm<sup>2</sup> (14 AWG) = 16 A

4 mm<sup>2</sup> (12 AWG) = 22 A

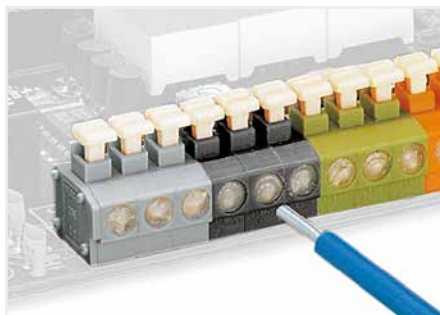
❶ Aluminum conductors per IEC 61545 standard, Class B, "Alloy 1370" with 90 ... 180 N/mm<sup>2</sup> tensile strength and 1 ... 4 % elongation.  
Standard values: 90 ... 180 MPa tensile strength,  
1 ... 4 % elongation (per EN 615.4.1)

WAGO "Alu-Plus" in the syringe offers a higher degree of reliability and cleanness when terminating solid aluminum conductors.

Filling is, for example, quickly performed on WAGO PCB terminal trips:



1. Push nozzle of the "Alu-Plus" syringe into every open conductor entry hole (one after the other).



2. Press plunger down until "Alu-Plus" has filled all conductor entry holes.



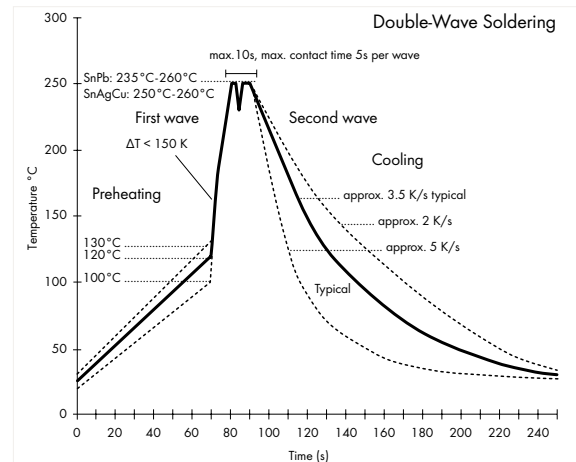
## Processing Information and Material Specifications

### • Soldering Information

#### Wave Soldering:

WAGO's PCB terminal blocks and connectors comply with the 2011/65/EU Directive of June 08, 2011 and display the "RoHS compliant" logo on their packaging.

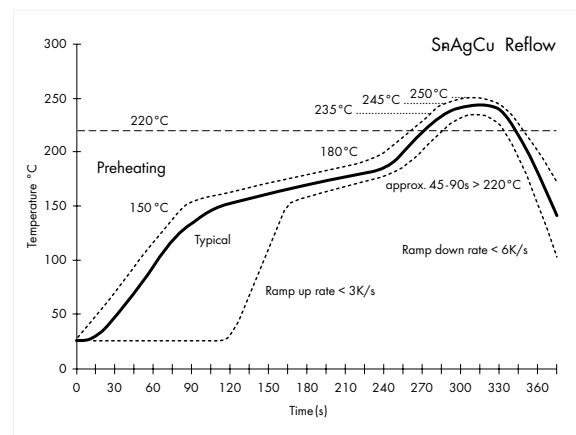
In accordance with IEC 61760-1, the maximum double-wave soldering temperature is 260°C for a maximum 10 seconds or 5 seconds per wave.



#### Reflow Soldering:

WAGO's THR and SMD PCB terminal blocks and connectors have high-temperature-resistant insulated housings and reflow solder contacts.

In accordance with IEC 61760-1 or IEC 60068-2-58, the maximum soldering temperature is 260°C (peak temperature). Due to customer-specific variables (e.g., component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.



### • Insulation Materials

WAGO primarily uses polyamide (PA 66 and PA 46) for housing current-conducting parts, as well as polyphthalamide (PPA) and polycarbonate (PC) for insulation material (see table). For more than 50 years, these materials have proven themselves in WAGO products and all are approved by certified, third-party agencies. All listed halogen-free and flame-retardant polymer materials do not contain any heavy metals, silicone, asbestos, or formaldehyde as formulation components.

Table: Standard Insulation Materials

Material	PA 66	PA 66 GF	PPA GF	PA 46	PC	PC
Flammability UL 94 flammability test ratings	V0	V0	V0	V2	V2	V0
Oxygen Index (OI) per EN ISO 4589-2	> 32 %	> 33 %	> 37 %	> 27 %	> 26 %	> 35 %
Glow-wire test per IEC 60695-2-12 GWF1* IEC 60695-2-13 GWIT*	850 °C 775 °C	850 °C 775 °C	850 °C 775 °C	750 °C 725 °C	800 °C 850 °C	960 °C 850 °C
Comparative Tracking Index (CTI) per IEC 60112	600 V	600 V	600 V	375 V	225 V	225 V
Temperature of the ball indentation hardness test per EN ISO 2039-1 IEC 60695-10-2	≥ 125 °C	≥ 175 °C	≥ 225 °C	n.s.**	≥ 125 °C	≥ 125 °C
RTI impact per UL 746B	105 °C	100 °C	115 °C	115 °C	125 °C	120 °C
Heat deflection temperature (HDT/B) per ISO 75 (at 0.45 MPa bending stress)	215 °C	235 °C	285 °C	280 °C	130 °C (1.8 MPa)	130 °C (1.8 MPa)
Surface resistivity per IEC 60093	10 <sup>12</sup> Ω	10 <sup>12</sup> Ω	10 <sup>15</sup> Ω	10 <sup>13</sup> Ω	10 <sup>15</sup> Ω	10 <sup>15</sup> Ω
Specific contact resistance per IEC 60093	10 <sup>15</sup> Ω/cm	10 <sup>15</sup> Ω/cm	10 <sup>13</sup> Ω/cm	10 <sup>13</sup> Ω/cm	10 <sup>11</sup> Ω/cm	10 <sup>13</sup> Ω/cm
Dielectric strength per IEC 60243-1	30 kV/mm	40 kV/mm	25 kV/mm	25 kV/mm	25 kV/mm	29 kV/mm

\*Value depends on wall thickness, EN 60335 compliance upon request; \*\*n.s. = not specified

**Polyamide (PA 66)**

WAGO uses modified, halogen-free, flame-retardant polyamides. These materials do not corrode, are difficult to ignite and feature self-extinguishing properties (V0 rating per UL 94). Adhering to UL 746C, the polyamides used at WAGO have a continuous operating temperature of 105°C (221°F) based on the relative temperature index with impact load (RTIimp). This ensures that the necessary electrical and mechanical insulating properties are maintained at a sufficiently guaranteed level over a long period of time. The short-term upper temperature limit is 200°C (392°F). In lower temperature ranges, it has been determined that no damage to the insulation material occurs during usage down to -35°C (-31°F). After installation and wiring, WAGO products can even be used at temperatures down to -60°C (-76°F). Environmental humidity (up to 2.5% in a standard atmosphere) is absorbed, providing the polyamides with optimum elasticity, strength and durability. In practical use, basic stabilization of WAGO's polyamides has been proven over many years as sufficient to prevent damage caused by ozone or UV radiation exposure in intended applications. Polyamides have excellent resilience against the most demanding climates and have proven themselves in tropical applications worldwide. Insulation parts made of polyamide are resistant to insects. The material does not provide oxygen or other biogenic elements to microorganisms. The presence of anaerobic earth bacteria, mold, fungus and enzymes does not degrade the material. Polyamides are resistant to most fuels, greases, and oils, as well as the most commonly used cleaners, such as alcohol, Freon, Frigen, and carbon tetrachloride. Acid resistance depends on the acid type and concentration, as well as the exposure time. The use of insulation materials during in-house production at WAGO only occurs after acceptance of factory test certificates and specified material tests.

**Glass Fiber-Reinforced Polyamide (PA 66 GF)**

WAGO uses glass-fiber-reinforced polyamides for components with increased mechanical demands, such as levers, push-buttons or housings exposed to high stresses, because glass-reinforced polyamides have significantly higher characteristic properties than non-reinforced polyamides. In general, materials are used that have excellent creepage current resistance, flammability ratings and high temperature resistance. More data can be found in the table.

**Polyphthalamide (PPA GF)**

Glass-fiber-reinforced, high-performance polyamides are ideal for high-temperature applications, due to the material's high level of thermal dimensional stability, its low dependence on ambient conditions and its excellent strength properties. The material's outstanding tracking resistance permits short creepage distances to be incorporated into miniature components. Fire protection equipment enables placement into flammability class V0 per UL 94 – even for extremely thin walls. PPA GF absorbs minute amounts of moisture from the ambient air, making it ideal for reflow soldering applications and for thin-walled, dimensionally stable components. More data can be found in the table.

**Polyamide (PA 46)**

In comparison with PA 66, PA 46 has substantially higher dimensional stability under heat. The relative temperature index with impact load (RTIimp) is 115°C (239°F) for PA 4.6. The reliable short-term temperature for the type used by WAGO is 280°C (536°F). More data can be found in the table.

**Polycarbonate (PC)**

Polycarbonate has excellent dimensional stability under heat. The electrical and mechanical properties remain intact at extremely high temperatures up to approximately 120°C (248°F) per UL Yellow Card. Its excellent electrical insulating properties and dimensional stability are virtually independent of environmental conditions, such as humidity and temperature. Highly precise components can be created due to the low shrinkage of the material during injection molding. Polycarbonate has excellent weather resistance and is also highly resistant to high-energy radiation. If the PC is not colored, then the components are glass-clear. Thanks to its desirable properties (e.g., dimensional stability, heat resistance, non-flammability, durability and transparency), PC is a proven and widely used material in the electrical industry. Depending on the demands placed on the finished product, WAGO uses polycarbonates that carry flammability classifications V2 and V0 per UL 94. Medium-viscosity PC is used that features excellent chemical resistance.

## Material Specifications (continued)

### Contact Materials

Hard and extra-hard electrolytic copper (ECu), as well as extra-hard copper alloys are the standard materials used for the current-carrying parts of all WAGO products.

These materials combine excellent conductivity and good chemical resistance without the risk of stress-induced cracking.

### Contact Plating

The special tin layer, which is the standard layer for all current-carrying parts in WAGO products, ensures perfect long-term protection against corrosive substances. Furthermore, these layers provide a gas-tight contact that ensures a durable transition resistance.

At the clamping unit, the conductor is embedded into the soft tin layer via high contact pressure. This protects the contact area against corrosion.

The thick tin layer also ensures good solderability of both PCB terminal block and connector solder pins.

### Clamping Spring Material

Every WAGO clamping spring is made of high-quality, accurately tested austenitic chrome nickel steel (CrNi) with high tensile strength, which boasts proven corrosion resistance through long-term usage.

It is resistant to sea spray, city pollutants and industrial emissions (e.g., sulfur dioxide, hydrogen sulfide).

At room temperatures of approximately 20°C (68°F), the material is resistant to salt solutions up to 30 % and dilute phosphoric acids up to 30%.

Even after decades of use, no galvanic corrosion between the chrome nickel spring steel (in connection with the contact materials used by WAGO) and the connected copper conductors has been detected.

The relaxation of the material as a function of time and surrounding temperatures up to 105°C (221°F) can be ignored. Samples loaded with 500 N/mm<sup>2</sup> at a temperature of 250°C (482°F) showed a relaxation of only 1.5%.

In certain product lines, the clamping springs are thermally treated at temperatures between 350°C (662°F) and 420°C (788°F) after production.

This treatment reduces internal stress due to the material's mechanical deformation, which may result in a slight brown discoloration of the spring surface.

WAGO only accepts deliveries of chrome nickel spring steel against certificates of conformity and after select material tests have been performed.

## General Technical Information on Electrical Equipment Used in Hazardous Areas

A prerequisite for a potentially explosive hazard is the formation of an explosive atmosphere. Such an atmosphere can be produced at any location where flammable gases or liquids are manufactured, processed, transported and/or stored.

Such **hazardous areas** can be found in a wide range of industries, including chemical plants, refineries, power plants, paint producing facilities, painting shops, filling stations, vehicles, sewage treatment plants, airports, grain mills or harbor facilities.

### THE FOLLOWING APPLIES AS A GUIDELINE FOR THE UNDERLYING PRINCIPLE FOR EXPLOSION PROTECTION:

#### General Requirements

The European EN 60079-0 Standard – VDE 0170-1 Classification – contains general requirements for the design and testing of electrical equipment to be used in hazardous areas. This ensures this equipment does not cause an explosion in the surrounding atmosphere.

#### Electrical Equipment

Electrical equipment includes all items used in whole or in part with electricity. This includes items for generation, transport, distribution, storage, measurement, control, conversion and consumption of electrical power, as well as telecommunications.

#### Ex Components

Ex components are elements of electrical equipment for hazardous areas that are marked with the "U" letter. These components must not be used on their own in such areas and require an additional certificate when used in such areas when installed in the electrical equipment.

#### Ignition Protection Categories

Only explosion-proof (protected) equipment must be used in areas in which an explosive atmosphere may still be expected despite the implementation of prevention measures. Explosion-protected electrical equipment can have various types of protection in accordance with the EN 60079 standard requirements.

Protection used by the manufacturer essentially depends on the type and function of the apparatus. From a safety point of view, all standardized types of protection should be viewed as equal.

The ignition protection category "n" exclusively describes the use of explosion-protected electrical components in Zone 2. This zone includes areas in which hazardous, potentially explosive atmospheres are likely to occur rarely or short-term. This represents a transition between Zone 1, in which explosion protection is required, and the safe area in which, for example, welding may be performed at any time. Regulations covering these electrical components are being prepared worldwide. Organizations such as KEMA in the Netherlands, or PTB in Germany certify that the devices meet the requirements of the EN 60079-15 standard. Ignition protection category "n" also requires that electrical equipment be provided with additional ID markings as follows:

A – non-sparking (function modules without relays/switches)

AC – sparking, contacts protected with seals (function modules with relays/without switches)

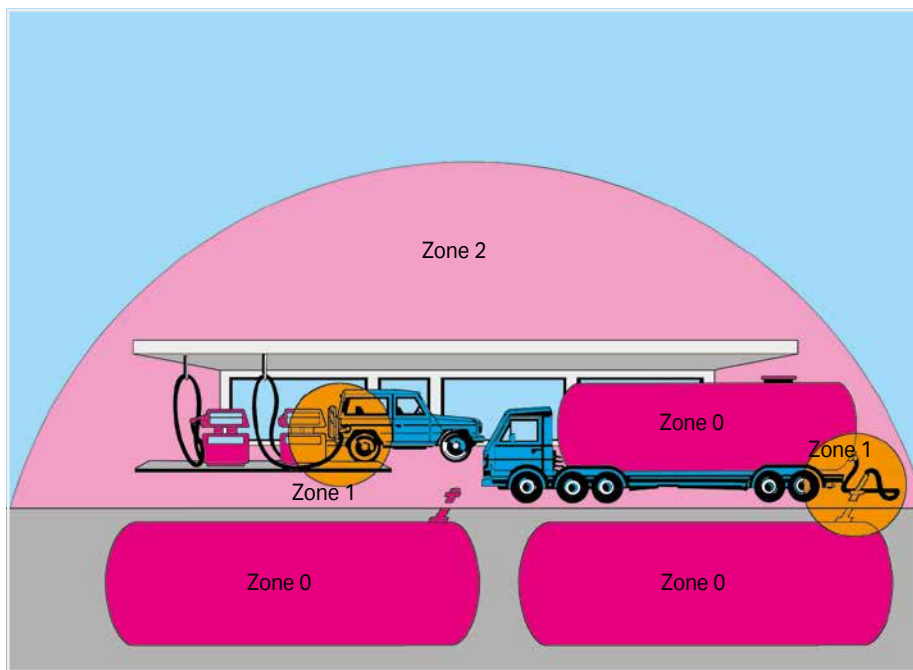
L – limited power (function modules with switches)

## General Technical Information on Electrical Equipment Used in Hazardous Areas (continued)

Hazardous areas are zones in which the atmosphere may become explosive. An explosive atmosphere is a mixture of flammable substances in the form of gases, vapors or mixtures with air under atmospheric conditions in critically mixed ratios such that

excessive high temperature, arcs or sparks may cause an explosion.

DIN EN 1127-1 and all other related standards that are well-known divide up hazardous areas according to the likelihood of the occurrence of an explosive atmosphere into the following zones:



- ❶ Hazardous areas due to explosive gases, vapors and mists

### Zone 0:

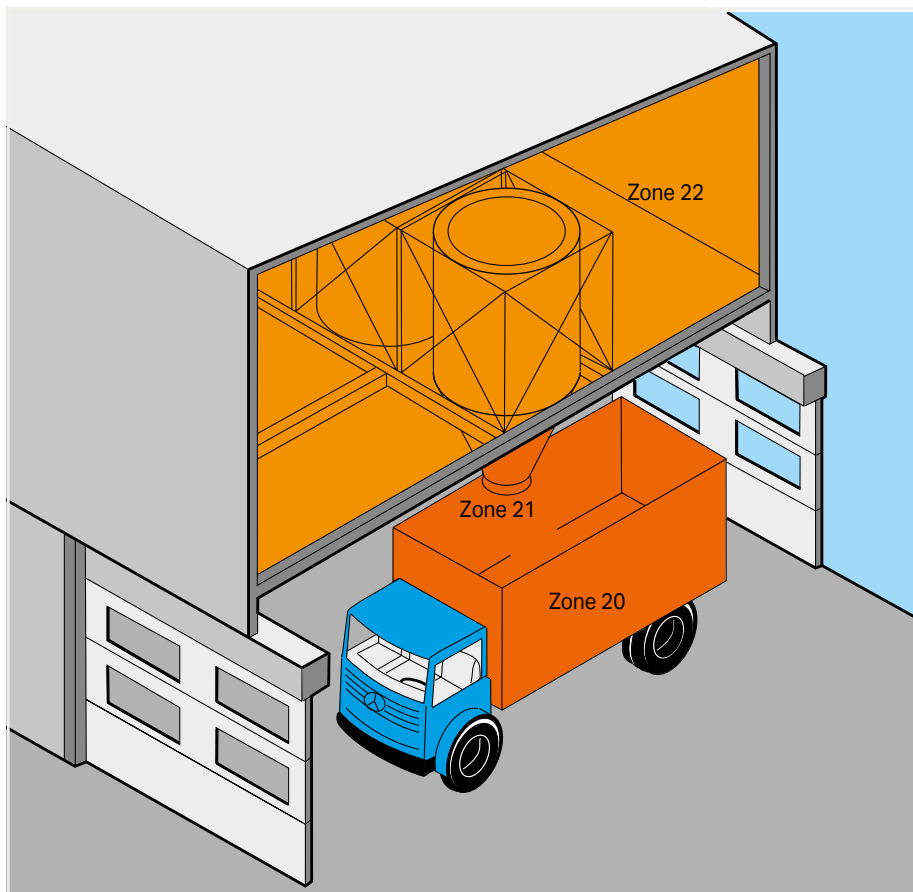
Areas in which an explosive atmosphere is present continuously, for long periods or frequently.

### Zone 1:

Areas in which an explosive atmosphere is likely to occur occasionally during normal operation.

### Zone 2:

Areas in which an explosive atmosphere is likely to occur rarely or only for a short period during normal operation.



- ❷ Hazardous areas due to explosive dust/air mixtures

### Zone 20:

Areas in which an explosive atmosphere due to dust/air mixtures is present continuously, for long periods or frequently and in which dust deposits of known or excessive thickness may form. Dust deposits alone do not constitute a Zone 20.

### Zone 21:

Areas in which the occurrence of an explosive atmosphere due to dust/air mixtures is to be expected occasionally and in which deposits or layers of combustible dust can generally be present.

### Zone 22:

Areas in which an explosive atmosphere due to dust/air mixtures is not likely to occur during normal operation and, if it occurs, will only exist for a short period, or in which accumulations or layers of combustible dust are present.

EN 60079-0 also classifies electrical equipment for use in hazardous areas into two groups:

#### Group I:

Electrical equipment for mines susceptible to firedamp

#### Group II:

Electrical equipment for hazardous areas, except for mines susceptible to firedamp. As this broad application range encompasses a large number of potentially flammable gases, Group II is broken down into sub-groups IIA, IIB and IIC. This breakdown is based on different gases/materials exhibiting differing ignition power levels as parameters. Therefore, representative gases have been allocated to these three sub-groups:

- IIA – Propane
- IIB – Ethylene
- IIC – Hydrogen

Publication of the WBK Mining Authority dated March 1989.  
Quote: "... terminal blocks that have been certified for the type of protection Ex e II will also be accepted, for example, for Group I – equipment with "e" (increased safety) protection type."

This information is also given under Item 12 in the EC Prototype Test Certificates, based on which the terminal blocks have been approved for Group I and Group II.

Temperature Category	Maximum Surface Temperature °C
T1	450
T2	300
T3	200
T4	135
T5	100
T6	85

Depending on the maximum surface temperature, electrical equipment in Group II are classified in temperature categories T1 to T6 for all protection types. The ambient temperature, which must be accounted for in dimensioning, is defined as 40°C/104°F (deviations are acceptable under some conditions).

Terminal blocks for "e" (increased safety) protection type are generally assigned to temperature category T 6. When terminal blocks are used in equipment of temperature categories T1 to T5, ensure that the highest temperature on the insulating parts does not exceed 85°C (185°F). The highest measured surface temperature rise must not exceed 40 K.

Thermal resistance of the insulation material must be at least 20°C (68°F) greater than the highest operating temperature. Low temperature stability is considered to be sufficient when the insulation material can withstand 24-hour storage at a temperature of -60°C (-76°F) without nullifying the type of protection.

#### Special Requirements

##### Increased safety Ex e

The European EN 60079-7 Standard – VDE 0170-6 Classification – contains special requirements for the design and testing of electrical equipment with "e" (increased safety) protection type for use in hazardous areas.

This standard is a supplement to EN 60079-0 and applies to equipment or parts thereof that neither generate sparks or arcing under normal operating conditions, nor exhibit hazardous temperatures.

This standard describes special measures, which have to be observed to obtain a safety degree according to the "e" (increased safety) protection type.

Ex components such as PCB terminal blocks are covered by Section 4.2 "Terminal Blocks for External Conductors."

The following are the most important design requirements for terminal blocks for external supply conductors to electrical equipment: These must:

- be sufficiently large to permit reliable connection of external supply conductors with cross-section of at least the size required by the nominal current of the equipment
- be protected against self-loosening and designed such that the supply conductors cannot slip out of their clamping units
- be designed such that adequate contact pressure is ensured without damaging the conductors
- be designed such that their contact pressure does not change with temperature cycling
- be equipped with a spring connecting link for the connection of stranded conductors
- be designed so as to allow secure connection of smaller conductors for terminal blocks up to 4 mm<sup>2</sup> (12 AWG).

#### Minimum Ignition Power of Typical Gases:

Explosion Group	I	IIA	IIB	IIC
Gas	Methane	Propane	Ethylene	Hydrogen
Ignition Power	280	250	82	16

The following table shows a comparison between the current practice based on ElexV, DIN VDE 0165: 1991 and the new EN 1127-1:

Device Group II				
Category	Protection degree	Adequate safety for	Comparable to current practice	New, based on EN 1127
1 Ex atmosphere is very probable, swirled dust	Highest	Two protective measures Two faults	Group II, Zone 0 Zone 10	Zone 0 Zone 20
2 Occasional Ex atmosphere	Increased	Equipment failure or fault	Group II, Zone 1	Zone 1 Zone 21
3 Low probability of Ex atmosphere, settled dust	Normal	Fault-free operation	Group II, Zone 2 Zone 11	Zone 2 Zone 22



## General Technical Information on Electrical Equipment Used in Hazardous Areas (continued)

It is expressly prohibited to use insulating parts for transferring contact forces. Terminal blocks with sharp edges which could damage supply lines and those types that can be rotated, turned or permanently deformed when fixed in place are not permitted for use. Terminal blocks for internal connections in electrical equipment must not be subjected to excessive mechanical stress. These items must fulfill the requirements for terminal blocks used for external supply conductors.

Clearances between conductive parts having different potentials must be at least 3 mm for external connections, as specified in Table 1. The value of the creepage distances depends on the working voltage, surface geometry of the insulating parts and tracking resistance of the insulation material.

Grooves on the surface may only be considered if they are at least 2.5 mm deep and wide; ribs on the surface only if their height is at least 2.5 mm and their width corresponds to the mechanical strength of the material, however not smaller than 1 mm.

**Table 1: Creepage Distances and Clearances**

Voltage <sup>1)</sup> RMS Value for AC or DC Voltage	Minimum Creepage Distance mm			Minimum Clearance
	Material Group			
	V	I	II	III a
10 <sup>2)</sup>	1.6	1.6	1.6	1.6
12.5	1.6	1.6	1.6	1.6
16	1.6	1.6	1.6	1.6
20	1.6	1.6	1.6	1.6
25	1.7	1.7	1.7	1.7
32	1.8	1.8	1.8	1.8
40	1.9	2.4	3	1.9
50	2.1	2.6	3.4	2.1
63	2.1	2.6	3.4	2.1
80	2.2	2.8	3.6	2.2
100	2.4	3	3.8	2.4
125	2.5	3.2	4	2.5
160	3.2	4	5	3.2
200	4	5	6.3	4
250	5	6.3	8	5
320	6.3	8	10	6
400 (440) <sup>1)</sup>	8	10	12.5	6
500 (550) <sup>1)</sup>	10	12.5	16	8
630 (690) <sup>1)</sup>	12	16	20	10
800	16	20	25	12
1000	20	25	32	14
1250	22	26	32	18
1600	23	27	32	20
2000	25	28	32	23
2500	32	36	40	29
3200	40	45	50	36
4000	50	56	63	44
5000	63	71	80	50
6300	80	90	100	60
8000	100	110	125	80
10000	125	140	160	100

1) The listed voltages are taken from IEC 60664-1. The working voltage \*) may exceed the voltage indicated in the table by 10%. This is based on the simplification of the supply voltages in accordance with Table 3b for IEC 60664-1. The listed values for creepage distances and clearances are based on a maximum limit deviation for supply voltage of  $\pm 10\%$ .

2) CTI values are not applicable for voltages of 10 V or less. Materials that do not meet the requirements of material group III a can be used.

Classification of insulation materials according to their tracking resistance is based on their Comparative Tracking Index (CTI) and is defined in Table 2 as follows:

This classification applies to insulating parts without ribs or grooves.

If the insulating parts have ribs or grooves sufficiently large to be considered, the minimum creepage distances must be set according to values for the insulation materials in the next-higher level (e.g., Group I, instead of Group II).

Accounting for the ambient operating temperature of 40°C (104°F) specified for electrical equipment, the current-carrying capacity of rubber-insulated conductors is reduced to 82%, based on DIN VDE 0298-4:2013-06, Table 12 and to 87% for PVC-insulated conductors for the current-carrying capacity defined for 30°C (86°F) in accordance with Item 4.3.3 in DIN VDE 0298-4:2013-06.

**Table 2:  
Tracking Resistance for  
Insulation Materials**

Material Group	Comparative Tracking Index
I	$600 \leq \text{CTI}$
II	$400 \leq \text{CTI} < 600$
III a	$175 \leq \text{CTI} < 400$

### Conductor Types and Conductor Preparation

In accordance with EN 60079-14/DIN VDE 0165-1, the ends of stranded and fine-stranded conductors must be protected against splaying (e.g., via cable lugs or ferrules) **or by the type of terminal blocks used**. Soldering alone is not sufficient. The conductor entry funnels of WAGO PCB terminal blocks fulfill this requirement.

According to EN 60069-7/DIN VDE 0170, Part 6, connecting electrical equipment to terminal blocks having an "e" (increased safety) protection type must not lead to a reduction of the clearances and creepage distances.

Based on experience through the application of terminal blocks in aggressive atmospheres in the chemical industry, WAGO recommends gas-tight tinned copper ferrules or tinned copper pin terminals when connecting fine-stranded conductors to terminal blocks in corrosive atmospheres.

## Approvals

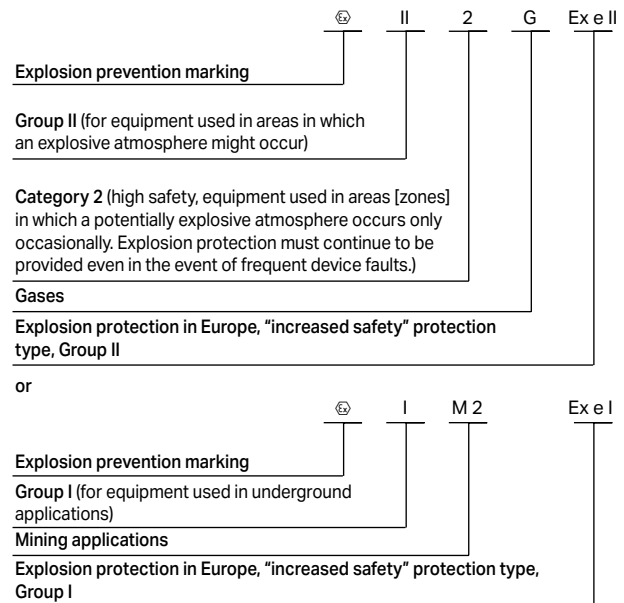
Terminal blocks may be used in Zones 1 and 2, provided that the terminal blocks are accommodated in an enclosure that has a minimum IP54 protection and an Ex e certification.

Terminal blocks are considered to be Ex components, because they are a part of the equipment. Part certificates provided by Ex Certification Agencies serve as a basis for issuing the complete conformity declaration for the unit.

An EC-type examination certificate is issued in accordance with the 2014/34/EU ATEX Directive.

In addition, an IEXEx certificate may also be obtained from an appropriate, recognized certification agency in accordance with the IECEx Certification Agreement that is accepted throughout Europe and also in countries such as Canada, China and Australia. These certificates can also be viewed at: [www.iecex.com](http://www.iecex.com)

## Terminal block marking per 2014/34/EU ATEX Directive:



Marking only with the Ex code 4 is also adequate as an alternative.

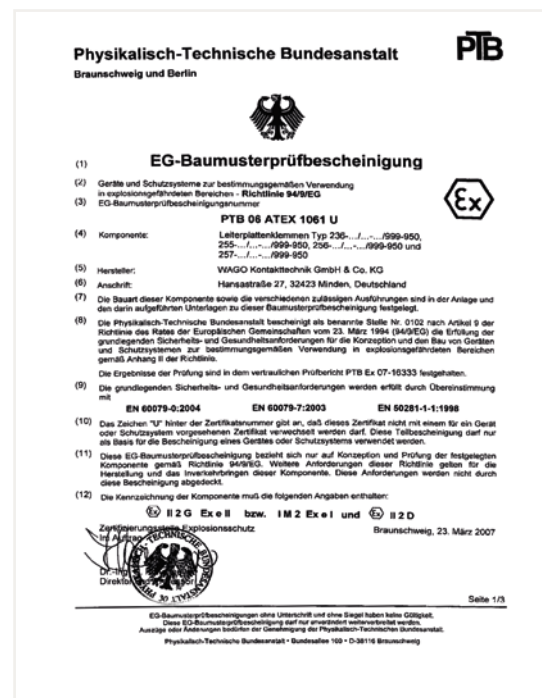
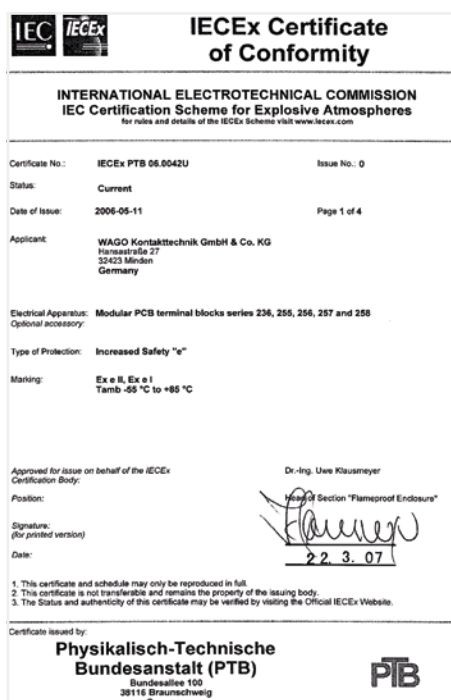
EC-type examination certificates have been granted to all WAGO terminal blocks listed in this catalog.

WAGO terminal blocks approved for use in Ex e II areas are manufactured of flame-resistant, self-extinguishing Polyamide 66. The same applies to the terminal blocks used in

non-hazardous areas. Tracking resistance with a CTI value of 600 as per IEC 60112 and a constant operating temperature of 105°C (22°F) in accordance with IEC 60216-1 and -2 are provided.

Factory part quality tests are performed on all PCB terminal blocks with Ex e II approval

to monitor and ensure the quality features described above.



## General Technical Information on Electrical Equipment Used in Hazardous Areas (continued)

### Special Requirements

#### "Intrinsic safety Ex i"

The European EN 60079-11 Standard – DIN EN 60079-11 Classification (VDE 0170-7) – contains special requirements for the design and testing of electrical equipment with "i" (intrinsic safety) protection type for use in hazardous areas.

A circuit is "intrinsically safe" when, under normal operating conditions and in the event of specific fault conditions, no sparks or thermal effects can occur and cause the ignition of a certain explosive atmosphere.

A distinction is made here between:

- intrinsically safe electrical equipment when all circuits are intrinsically safe and
- associated electrical equipment including both intrinsically and non-intrinsically safe circuits, and being designed such that the non-intrinsically safe circuits cannot affect the intrinsically safe ones.

Intrinsically safe electrical equipment and intrinsically safe parts of associated electrical equipment are classified at "ia" or "ib" protection level. Electrical equipment classified Ex "ia" must not ignite when current is applied in the following cases:

- During fault-free operation, with those non-discreet faults present that result in the most adverse condition;
- During fault-free operation and with a discreet fault,

plus those non-discreet faults that result in unfavorable conditions.

- During fault-free operation with two discreet faults, plus those non-discreet faults that result in the most adverse conditions.

Electrical equipment classified Ex "ib" must not ignite when current is applied in the following cases:

- During fault-free operation, with those non-discreet faults present that result in the most adverse condition;
- During fault-free operation and with a discreet fault, plus those non-discreet faults that result in unfavorable conditions.

**No special approval is required for terminal blocks used as simple electrical equipment for "Ex i" protection type, as they do not contain a voltage source and precise information is available concerning electrical data and temperature rise performance.**

The terminal blocks must be identifiable, for example by their type designation, and the following design requirements must also be upheld:

- The clearance between bare, conducting parts of terminal blocks of different intrinsically safe circuits has to be equal or higher than the values specified in the standard. In addition, clearances between the terminal blocks must be so that the clearances between the bare, conductive parts of the connected external conductors is at least 6 mm when measured. Each possible motion of metallic parts that are not rigidly secured must be considered.
- When a possible connection has not been considered during safety analysis, the minimum clearance between grounded metallic or other conducting parts and the uninsulated conducting parts of the conductors that are connected to the terminal blocks must be 3 mm.

**Terminal block marking must be unique and clearly visible. If a color is used for this, the color must be light blue (similar to RAL 5015).**

Note also when using terminal blocks:

Terminal blocks used for intrinsically safe circuits must be isolated from those used in non-intrinsically safe circuits. This is accomplished by several accepted methods. First, intrinsically safe circuits are separated by at least 50 mm of air space from non-intrinsically safe circuits. Second, intrinsically safe circuits are housed in a separate enclosure. Third, intrinsically safe terminal blocks are separated from non-intrinsically safe terminal blocks by either an insulated partition or grounded metal partition. The partition size must allow for either 1.5 mm or less distance from the sides of the housing or provide at least 50 mm of creepage distance between the intrinsically and non-intrinsically safe circuits in all directions.

Requirements pertaining to the necessary distances as appropriate for use of the terminal blocks in the area DIN EN 60079-11 (VDE 0170-7) "Explosive atmosphere – Part 11: Device protection by intrinsically safe features "i" (IEC 60079-11)" are defined under Section 6.2 "Connecting point for external circuits," Section 6.2.1 "Terminal blocks." In general, the following can be stated for terminal blocks based on figure 1: "Example of isolation of intrinsically safe terminal blocks with partition" in conjunction with figure 2: "Example of isolation of conductive parts," considering Table 5 – "Clearances, Creepage and Isolation Distances."

#### Outside:

a) Isolated intrinsically safe circuits: at least 6 mm

**All PCB terminal blocks listed on the ordering pages as suitable for Ex "i" applications fulfill these requirements.**

b) Intrinsically safe circuits and normal circuits (non-intrinsically safe):  $\geq 50$  mm

#### Inside:

a) Ex "i" to Ex "i"

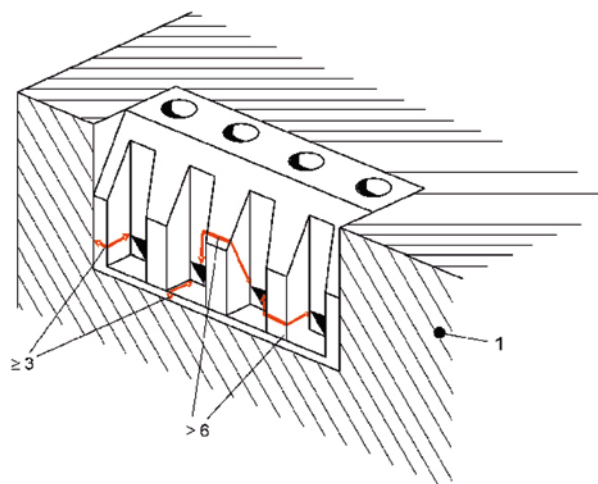
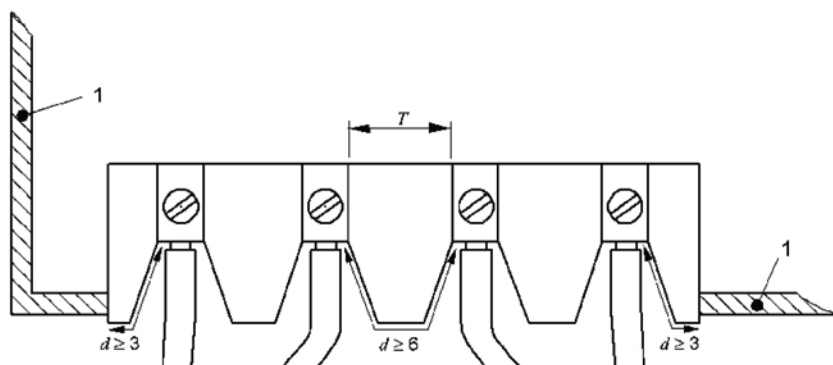
b) Ex "i" to normal circuits

c) Ex "i" to ground

Based on Figure 2 and Table 5 (see next page) in accordance with the selected protection level and the special requirements for isolation distances as described in Sections 6.3.1 to 6.3.13, or in accordance with the alternative procedure for dimensioning of isolation distances given in Annex F.

Terminal blocks with smaller pin spacing may also be used for internal connections, provided they meet the requirements laid out in Table 5 (see below).

The exact clearances and creepage distances as well as separation distances based on Table 5 must be derived from the application items cited above.



#### Legend:

1: Conductive cover

T: Distances based on Table 5

d: Distance at outer connecting parts of the terminal blocks according to 6.2.1

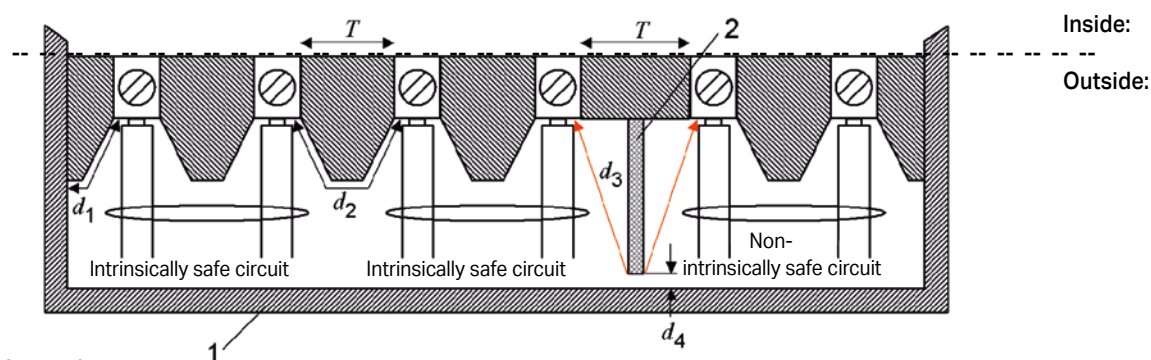
#### Note:

The dimensions indicated here represent the clearances and creepage distances around the insulation and not the thickness of the insulation.

Dimensions in mm

Figure 1a: Requirements for clearances and creepage distances for terminal blocks with isolated, intrinsically safe circuits

## General Technical Information on Electrical Equipment Used in Hazardous Areas (continued)



### Legend:

- 1 Cover: non-conductive or conductive and grounded  
 2: Partition based on 6.2.1 b); in this example, the partition must end at the base  
 T: Distances based on Table 5  
 $d_1 \geq 3 \text{ mm}$ , when the cover is conductive and grounded  $\geq 6 \text{ mm}$   
 $d_3 \geq 50 \text{ mm}$  or  $d_4 \leq 1.5 \text{ mm}$

### Note:

The dimensions indicated here represent the clearances around the insulation and not the thickness of the insulation!

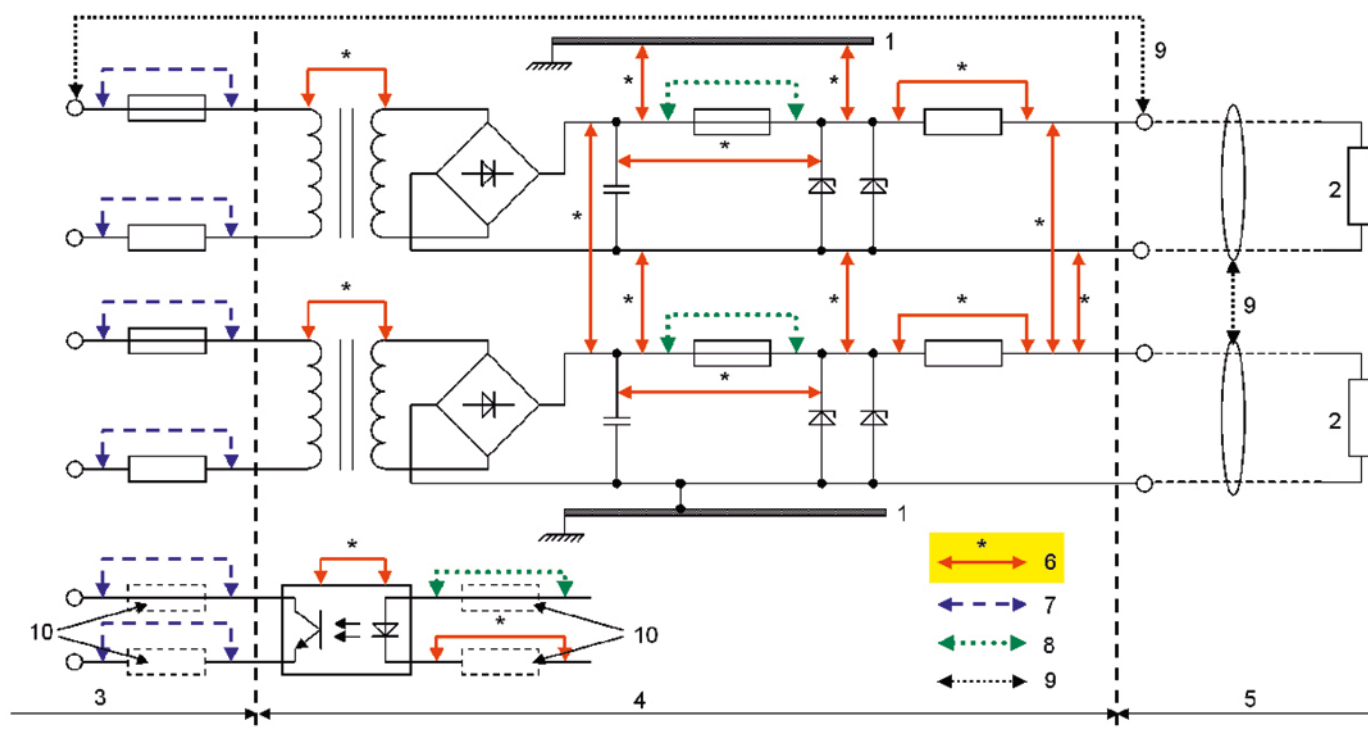
Figure 1b: Example of isolation of intrinsically safe and non-intrinsically safe terminal blocks by a partition

Table 5: Clearances, Creepage and Isolation Distances

1	2		3		4		5		6		7	
Voltage (Peak)  (V)	Clearance  (in mm)		Separation by Encapsulation  (in mm)		Separation by Fixed Insulation  (in mm)		Creepage Distance through Air  (in mm)		Creepage Distance beneath Protective Layer (in mm)		Comparative Tracking Index (CTI)	
Protection Level	ia, ib	ic	ia, ib	ic	ia, ib	ic	ia, ib	ic	ia, ib	ic	ia	ib, ic
10	1.5	0.4	0.5	0.2	0.5	0.2	1.5	1.0	0.5	0.3	--	
30	2.0	0.8	0.7	0.2	0.5	0.2	2.0	1.3	0.7	0.3	100	100
60	3.0	0.8	1.0	0.3	0.5	0.3	3.0	1.9	1.0	0.6	100	100
90	4.0	0.8	1.3	0.3	0.7	0.3	4.0	2.1	1.3	0.6	100	100
190	5.0	1.5	1.7	0.6	0.8	0.6	8.0	2.5	2.6	1.1	175	175
375	6.0	2.5	2.0	0.6	1.0	0.6	10.0	4.0	3.3	1.7	175	175
550	7.0	4.0	2.4	0.8	1.2	0.8	15.0	6.3	5.0	2.4	275	175
750	8.0	5.0	2.7	0.9	1.4	0.9	18.0	10.0	6.0	2.9	275	175
1000	10.0	7.0	3.3	1.1	1.7	1.1	25.0	12.5	8.3	4.0	275	175
1300	14.0	8.0	4.6	1.7	2.3	1.7	36.0	13.0	12.0	5.8	275	175
1575	16.0	10.0	5.3	*	2.7	*	49.0	15.0	16.3	*	275	175
3.3k	*	18.0	9.0	*	4.5	*	*	32.0	*	*	*	*
4.7k	*	22.0	12.0	*	6.0	*	*	50.0	*	*	*	*
9.5k	*	45.0	20.0	*	10.0	*	*	100.0	*	*	*	*
15.6k	*	70.0	33.0	*	16.5	*	*	150.0	*	*	*	*

Note 1: \*At present, no values have been recommended for these voltages.

Note 2: Proof of fulfillment of the CTI requirements for the insulating materials must be provided by the manufacturer.  
 Defining a CTI is not required for insulation materials for voltage levels up to 10 V.



#### Legend:

- 1: Chassis
- 2: Load
- 3: Non-intrinsically safe circuit defined by  $U_m$
- 4: Portion of intrinsically safe circuit, item is not intrinsically safe
- 5: Intrinsically safe circuit
- 6: Dimensions for which Table 5 applies
- 7: Dimensions for which general industrial standards apply
- 8: Dimensions per 7.3
- 9: Dimensions based on 6.2.1 for output terminal blocks between isolated intrinsically safe circuits ( $d_2 \geq 6 \text{ mm}$ ) and between intrinsically safe circuits and non-intrinsically safe circuits ( $d_3 \geq 50 \text{ mm}$ )
- 10: Where required











Figure 2: Isolation examples for conductive parts



In accordance with DIN EN 60079-14 (VDE 0165-1), in intrinsically safe circuits, the ends of stranded and fine-stranded conductors must be protected against splaying (e.g., via cable lugs or ferrules) **or by the type of terminal blocks used**. Soldering alone is not sufficient. The conductor entry funnels of WAGO PCB terminal blocks fulfill this requirement.

WAGO recommends gas-tight tinned copper ferrules or tinned copper pin terminals when connecting fine-stranded conductors to terminal blocks in corrosive atmospheres.



## International Certification Organizations – Overview

		Abbreviation			Abbreviation
	Underwriters Laboratories USA <a href="http://www.ul.com">http://www.ul.com</a>	UL		Danmarks Elektriske Materielkon- trol Denmark <a href="http://www.demko.dk">http://www.demko.dk</a>	DEMKO
	Underwriters Laboratories USA <a href="http://www.ul.com">http://www.ul.com</a>	UL		CENELEC CERTIFICATION AGREE- MENT Danmarks Elektriske Materielkon- trol Denmark <a href="http://www.cenelec.org">http://www.cenelec.org</a>	CCA Appr. No. with NL
Y	Underwriters Laboratories USA <a href="http://www.ul.com">http://www.ul.com</a>	cURus			
	Underwriters Laboratories USA <a href="http://www.ul.com">http://www.ul.com</a>	cULus		SETI – FEMKO Sähkötarastuskeskus Elinspek- tionscentralen Finland <a href="http://www.seti.fi">http://www.seti.fi</a>	
	Canadian Standards Association Canada <a href="http://www.csa.ca">http://www.csa.ca</a>	CSA		Sähkötarastuskeskus Elinspek- tionscentralen Finland <a href="http://www.fimko.com">http://www.fimko.com</a>	FIMKO
	VDE-Gutachten mit Ferti- gungsüberwachung Germany <a href="http://www.vde.de/vde/html/e/home.htm">http://www.vde.de/vde/html/e/home.htm</a>	VDE		South African Bureau of Standards South Africa <a href="http://www.sabs.co.za">http://www.sabs.co.za</a>	SABS
	VDE – Deutscher Verband für Elektrotechnik Germany <a href="http://www.vde.de">http://www.vde.de</a>			RosTesT Russia <a href="http://www.rostest.ru">http://www.rostest.ru</a>	ROTEST
VDE	VDE – Prüfbericht Germany			Departamentul Moldovastandard Moldova <a href="http://www.moldova.md/ro/govern-ment/oll/D_STAND/en/strcent2.htm">http://www.moldova.md/ro/govern-ment/oll/D_STAND/en/strcent2.htm</a>	CSM
	Österreichischer Verband für Elektrotechnik Austria <a href="http://www.ove.at">http://www.ove.at</a>	ÖVE		Certificate of Registration Great Britain <a href="http://www.astacertification.com">http://www.astacertification.com</a>	ASTA
	Schweizerischer Elektrotech- nischer Verein Switzerland <a href="http://www.sev.ch/">http://www.sev.ch/</a>	SEV		Rheinisch-Westfälischer Tech- nischer Überwachungsverein e.V. Germany <a href="http://www.rwtuv.de">http://www.rwtuv.de</a>	RWTÜV
	N.V. tot Keuring van Elektrotech- nische Materialen Netherlands <a href="http://www.kema.nl">http://www.kema.nl</a>	KEMA		Elektrotechnick´y v´yskumn´y a projektov´y ústav Czech Republic <a href="http://www.ezu.cz">http://www.ezu.cz</a>	EZU
CCA	CENELEC CERTIFICATION AGREE- MENT N.V. tot Keuring van Elektrotech- nische Materialen Netherlands <a href="http://www.cenelec.org">http://www.cenelec.org</a>	CCA Appr. No. with NL		Stowarzyszenie Elektrykow Pol- skich Poland <a href="http://www.sep.com.pl">http://www.sep.com.pl</a>	BBJ
	Norges Elektriske Materialkontroll Norway <a href="http://express.nemko.com">http://express.nemko.com</a>	NEMKO		Stowarzyszenie Elektrykow Pol- skich Poland <a href="http://www.bbj.pl">http://www.bbj.pl</a>	SEP
	Svenska Elektriska Materielkon- trollanstalten AB Sweden <a href="http://www.semko.com">http://www.semko.com</a>	SEMKO			

		Abbreviation			Abbreviation
<b>CNET</b>	Centre National d'Etudes des Télécommunications France <a href="http://www.lannion.cnet.fr">http://www.lannion.cnet.fr</a>	CNET		Robbanásbiztos Villamos Berendezések Hungary <a href="http://www.bki.hu">http://www.bki.hu</a>	BKI
<b>LCIE</b>	Laboratoire Central des Industries Electriques France <a href="http://www.lcie.fr">http://www.lcie.fr</a>	LCIE	CB	CB – TEST CERTIFICATE India <a href="http://www.ul-europe.com">http://www.ul-europe.com</a>	CB
	Fyzikální Technický Ústav, Ostrava-Radvanice Czech Republic <a href="http://www.ftzu.cz">http://www.ftzu.cz</a>	FTZU	CB	CB – TEST CERTIFICATE China <a href="http://www.ul-europe.com">http://www.ul-europe.com</a>	CB
				UL-International Demko A/S Denmark <a href="http://www.ul-europe.com">http://www.ul-europe.com</a>	ENEC
<b>Marine Approvals</b>					
	Germanischer Lloyd Germany <a href="http://www.gl-group.com">http://www.gl-group.com</a>	GL	Ex Approvals		
	Bureau Veritas France <a href="http://www.bureauveritas.fr">http://www.bureauveritas.fr</a>	BV	P	Physikalisch Technische Bundesanstalt Germany Ex e II <a href="http://www.ptb.de">http://www.ptb.de</a>	PTB
	Lloyd's Register of Shipping Great Britain <a href="http://www.lloydsregister.com">http://www.lloydsregister.com</a>	LR	Y	Underwriters Laboratories USA <a href="http://www.ul.com">http://www.ul.com</a>	cURus-EX
	NV – Det Norske Veritas Norway <a href="http://www.dnv.com">http://www.dnv.com</a>	DNV	K	N.V. tot Keuring van Elektrotechnische Materialen Netherlands <a href="http://www.kemaquality.com">http://www.kemaquality.com</a>	KEMA-EX
	Russian Maritime Register of Shipping GUS <a href="http://www.rs-head.spb.ru">http://www.rs-head.spb.ru</a>	RMR	GOSENERGO-Ex GOSENERGONADZOR Russia		GOSENERGO-EX
	Polski Rejestr Statków Poland <a href="http://www.prs.pl">http://www.prs.pl</a>	PRS	-	Fyzikální Technický Ústav, Ostrava-Radvanice Czech Republic <a href="http://www.ftzu.cz">http://www.ftzu.cz</a>	FTZU
	Korean Register of Shipping Korea <a href="http://www.krs.co.kr">http://www.krs.co.kr</a>	KR		Robbanásbiztos Villamos Berendezések Hungary <a href="http://www.bki.hu">http://www.bki.hu</a>	BKI-Ex
	American Bureau of Shipping USA <a href="http://www.eagle.org">http://www.eagle.org</a>	ABS			

## Electrical Engineering Laboratory

### Product Safety for Our Customers

To use terminal blocks globally, they must satisfy certain standards and obtain test certificates. These requirements apply to every manufacturer. WAGO also conducts its own tests to increase standards and offer greater reliability with its products. Products undergo a full range of mechanical, electrical and climatic testing, and we'll share a few of those processes with you.

#### Pull-Out Test (per EN 60947-7-1, EN 60998-2-2)

During the pull-out force test, a conductor is pulled on until it is removed from the clamping unit. The design of the terminals means that extraction only occurs after the standard pull-out force has been exceeded many times over.

#### Vibration Test (per IEC/EN 60068-2-6)

Depending on the application, such as railway (per EN 61373) or marine (per GL, LR, DNV), there are various testing requirements to determine if the long-term effects of vibrations degrade electrical connections. The test specimen is subjected to different loads on three axes in an electrodynamic vibration system. The amplitude, the acceleration, and particularly the frequency of the vibration vary during the test. The test values are increased many times over the standard values to meet special customer requirements.

#### Shock Test (per IEC/EN 60068-2-27)

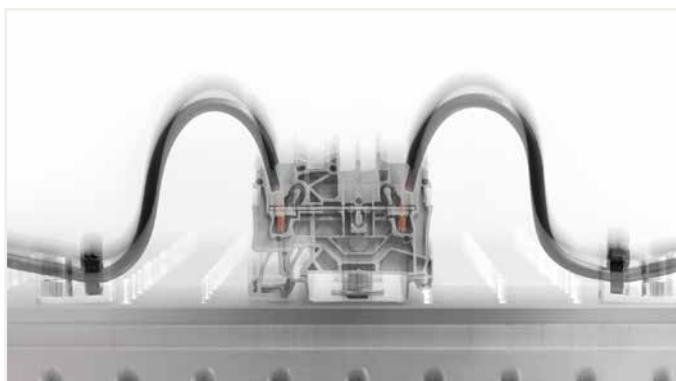
The shock test is very similar to the vibration test except that, instead of continuous vibrations, single shocks are applied to the test specimen. Shock tests are usually performed, for example, at an acceleration of 20g over a period of 11 ms. Tests for special requirements often call for much higher values and are also conducted in our laboratory.

#### Voltage Drop Test under Bending Stress (per WAGO test requirements)

The voltage drop test under bending stress simulates mechanical stress on the clamping unit. In everyday use, this stress can occur during installation, for example, when an electrician shoves connected conductors to the side in order to access a specific component. The quality of the clamping unit when moving a connected conductor can be validated by the constantly stable measured value of the voltage drop.

#### WAGO Test Lab

This means that WAGO's products can be used safely and reliably both in Europe and anywhere globally for a wide variety of applications. We heavily emphasize the importance of global acceptance during development. As a result, we can present documentation that verifies our high levels of product safety and reliability while ensuring the fulfillment and accuracy of technical data, which are the highest priorities for our customers and users worldwide. On December 22, 2009, our test lab was accredited by the German Accreditation Association (Deutsche Gesellschaft für Akkreditierung GmbH) in accordance with DIN EN ISO/IEC 17025.





## Deutsche Akkreditierungsstelle GmbH

**Beliehene gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV**  
Unterzeichnerin der Multilateralen Abkommen  
von EA, ILAC und IAF zur gegenseitigen Anerkennung

# Akkreditierung



Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium

**WAGO Kontakttechnik GmbH & Co. KG**  
**Hansastraße 27, 32423 Minden**

die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

**Elektrische und mechanische Prüfungen an Klemmen und Steckverbinder  
sowie Umweltsimulation**

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 18.12.2014 mit der Akkreditierungsnummer D-PL-19704-01 und ist gültig bis 17.12.2019. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 5 Seiten.

Registrierungsnummer der Urkunde: **D-PL-19704-01-00**

Frankfurt am Main, 18.12.2014

Siehe Hinweise auf der Rückseite

  
Im Auftrag Dipl.-Ing. (FH) Ralf Egner  
Abteilungsleiter

## Success for generations: environmental protection at WAGO



At WAGO, we see environmental protection not only as compliance with environmental protection requirements.

As a growing company, our commitment to the environment drives our efforts to deliver new ideas, new concepts and new technologies along the product lifecycle. Here our employees and business partners support us.

### Corporate environmental protection

Business growth also leads to higher consumption of resources. We have realized that the economic success of a company also depends on the achievement of environmental goals.

As a manufacturing company, we therefore support developments that make a contribution to environmental protection. In doing so, we always pursue individual material flows along the value chain, because we see resources, product design, production and consumption as a whole.

With our environmental management system certified in accordance with DIN EN ISO 14001, we ensure that the required national and international requirements are complied with in all areas of the company and that the concept of environmental protection is practiced in all corporate processes. In addition, WAGO is pursuing further efforts in the field of environmental protection that go far beyond the requirements of ISO

Some examples include the recycling of plastics, resource savings on product and packaging materials, the use of recycled paper throughout the company, the introduction of e-filling stations and the use of waste heat from production processes.

### Product-related environmental protection

Product-related environmental protection is an important part of sustainable environmental management at WAGO. Ensuring compliance with substance bans / restrictions worldwide, such as: As REACH, RoHS has a high priority.



## Success for generations: environmental protection at WAGO

### RoHS – Restriction of the use of certain Hazardous Substances

It is an EC directive that regulates the use of certain hazardous substances in electrical and electronic equipment. In addition to reducing the harmful effects on humans and the environment, legislation aims to improve recycling possibilities. WAGO closely monitors the development regarding RoHS and reacts promptly to specifications accordingly. For more information about RoHS please contact us via [ehs-product-compliance@wago.com](mailto:ehs-product-compliance@wago.com).

**RoHS** ✓  
**Compliant**

### REACH – Registration, Evaluation and Authorisation of Chemicals

On 01.06.2007 the regulation (EC) no. 1907/2006 (REACH regulation) came into force and since then forms a valid legal basis for all EU member states. To protect human health and the environment, this EU Chemicals Regulation aims to classify and identify all chemicals, including their effects.

The REACH Regulation creates specific obligations for each actor in the supply chain. The products manufactured by WAGO are to be designated as products in the sense of the regulation. Since products are not subject to registration, WAGO usually assumes the role of the downstream user in the supply chain. WAGO therefore has an obligation to provide information along the supply chain in accordance with REACH Article 33. WAGO is naturally aware of this obligation.

For more information about our reporting requirements according to REACH Article 33 please visit our website "REACH SVHC Declaration" via [www.wago.com/svhc](http://www.wago.com/svhc)

### BOMcheck

European legislation such as REACH or RoHS requires the provision of information on restricted ingredients in products. This information must be shared by manufacturers and suppliers in the supply chain. WAGO meets this challenge in product-related environmental protection successfully and efficiently with BOMcheck.

**BOMcheck**✓.net

BOMcheck is a centralized database for the declaration of ingredients. It is a compliance tool specifically designed to enable manufacturers and suppliers to produce their substance declarations under REACH, RoHS, and other restrictions on ingredients in an efficient and structured manner. This Internet database system increases data quality in the area of product-related environmental protection.

Further information on BOMcheck can be found at the following link: <http://www.bomcheck.net>

### Less is more: our packaging

Recycling is the basis for choosing our packaging materials. All packaging used by WAGO can be recycled in the economic cycle without further pretreatment. In addition to the aspect of recycling, emphasis is placed on resource conservation. For this reason, our cardboard boxes consist of 80% recycled paper and are marked with the Resy symbol. The Resy symbol guarantees compliance with the Packaging Ordinance for transport packaging. The labeling is partly done by perforation. This process enables the colorless printing of WAGO cardboard boxes. This avoids unnecessary environmental pollution.





# Indexes and Addresses

Indexes and Addresses

	Page
Item Number Index	326
WAGO Worldwide	336

## Item Number Index

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>206 Series</b>		<b>216 Series</b>		<b>221 Series</b>		<b>231 Series</b>	
206-294	129	216-107	271	221-510/000-006	245	231-324/037-000	106
206-804	272	216-108	271	221-510/000-053	245	231-332/001-000	106
206-830	265	216-109	271	221-511	249	231-332/108-000	106
206-831	261	216-110	271	221-512	247	231-346/108-000	106
206-841	265	216-121	271	221-512/000-004	247	231-354/001-000	106
206-859	263	216-122	271	221-513	247	231-362/001-000	106
206-860	263	216-123	271	221-513/000-004	247	231-384/001-000	106
206-861	263	216-124	271	221-515	247	231-432/001-000	105
206-880	262	216-131	271	221-515/000-004	247	231-432/001-000/105-604	105
206-1125	269	216-132	271	221-522	247	231-432/040-000	105
206-1126	269	216-151	271	221-522/000-004	247	231-442/001-000/105-604	105
206-1127	269	216-152	271	221-523	247	231-444/040-000	105
206-1128	269	216-201	271	221-523/000-004	247	231-454/001-000	105
206-1129	269	216-202	271	221-525	247	231-532/001-000	106
206-1131	269	216-203	271	221-525/000-004	247	231-532/108-000	106
206-1132	269	216-204	271	221-612	245	231-546/108-000	106
206-1204	270	216-205	271	221-613	245	231-554/001-000	106
206-1205	270	216-206	271	221-615	245	231-562/001-000	106
206-1206	270	216-207	271	221-682	249	231-584/001-000	106
206-1207	270	216-208	271	221-683	249	231-602	105
206-1216	270	216-209	271	221-685	249	231-602/018-000	105
206-1400	266	216-210	271			231-602/019-000	105
206-1403	266	216-210	271			231-602/114-000	105
206-1411	266	216-221	271	<b>222 Series</b>		231-624	105
206-1412	266	216-222	271	222-412	251	231-624/018-000	105
206-1413	266	216-223	271	222-413	251	231-624/019-000	105
206-1414	266	216-224	271	222-415	251	231-624/114-000	105
206-1415	266	216-241	271	222-500	251	231-632	106
206-1418	266	216-242	271	222-505	245	231-632/018-000	106
206-1419	266	216-243	271	222-510	245	231-632/019-000	106
206-1441	267	216-244	271			231-632/109-000	106
206-1442	267	216-246	271	<b>224 Series</b>		231-632/114-000	106
206-1451	267	216-262	271	224-101	235	231-632/129-000	106
206-1481	268	216-263	271	224-104	235	231-646/109-000	106
206-1482	268	216-264	271	224-112	235	231-646/129-000	106
206-1491	268	216-266	271	224-114	235	231-654	106
206-1492	268	216-267	271	224-201	235	231-654/018-000	106
		216-284	271			231-654/019-000	106
		216-286	271			231-654/114-000	106
		216-287	271	<b>231 Series</b>		231-702/008-000	109
<b>209 Series</b>		216-288	271	231-102/008-000	105	231-702/026-000	109
209-119	142	216-289	271	231-102/026-000	105	231-702/031-000	109
209-120	142	216-301	271	231-102/031-000	105	231-702/037-000	109
209-122	142	216-302	271	231-102/037-000	105	231-712/008-000	109
209-123	142	216-321	271	231-124/008-000	105	231-712/026-000	109
209-130	262	216-322	271	231-124/026-000	105	231-712/031-000	109
209-132	262	216-542	271	231-124/031-000	105	231-712/037-000	109
209-137	142	216-545	271	231-124/037-000	105	231-732/001-000	109
209-151	132	216-546	271	231-132/001-000	105	231-742/001-000	109
209-157	132	216-547	271	231-132/001-000/105-604	105	231-762/001-000	109
209-164	132			231-132/040-000	105	231-772/001-000	109
209-290	154			231-142/001-000/105-604	105	231-832/001-000	108
		<b>218 Series</b>		231-144/040-000	105	231-832/001-000/105-604	108
		218-102	40	231-154/001-000	105	231-842/001-000/105-604	108
<b>210 Series</b>		218-102/000-604	40	231-162/003-000	105	231-846/001-000	108
210-110	132	218-107/000-604	40	231-180/003-000	105	231-862/001-000	108
210-111	161	218-124	40	231-202/008-000	108	231-862/001-000/105-604	108
210-112	160	218-502	40	231-202/026-000	108	231-872/001-000/105-604	108
210-113	160	218-502/000-604	40	231-202/031-000	108	231-876/001-000	108
210-136	272	218-507/000-604	40	231-202/037-000	108	231-902	262
210-137	272	218-524	40	231-216/008-000	108	231-932/001-000	109
210-154	142			231-216/026-000	108	231-942/001-000	109
210-176	132			231-216/031-000	108	231-962/001-000	109
210-196	160	<b>221 Series</b>		231-216/037-000	108	231-972/001-000	109
210-295	161	221-412	245	231-232/001-000	108	231-2102/026-000	105
210-296	161	221-413	245	231-232/001-000/105-604	108	231-2102/037-000	105
210-334	237	221-415	245	231-242/001-000/105-604	108	231-2116/026-000	105
210-647	260	221-482	249	231-246/001-000	108	231-2116/037-000	105
210-648	260	221-483	249	231-262/001-000	108	231-2202/026-000	108
210-657	260	221-485	249	231-262/001-000/105-604	108	231-2202/037-000	108
210-658	260	221-500	245	231-272/001-000/105-604	108	231-2212/026-000	108
210-719	260	221-500/000-006	245	231-276/001-000	108	231-2212/037-000	108
210-720	260	221-500/000-053	245	231-302/008-000	106	231-2302/026-000	106
210-721	260	221-501	249	231-302/026-000	106	231-2302/037-000	106
210-722	260	221-502	247	231-302/031-000	106	231-2302/107-000	106
		221-502/000-004	247	231-302/037-000	106	231-2316/026-000	106
<b>216 Series</b>		221-503	247	231-302/107-000	106	231-2316/037-000	106
216-101	271	221-503/000-004	247	231-316/107-000	106	231-2316/107-000	106
216-102	271	221-505	247	231-324/008-000	106	231-2702/026-000	109
216-103	271	221-505/000-004	247	231-324/026-000	106	231-2712/026-000	109
216-104	271	221-510	245	231-324/031-000	106		

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>232 Series</b>		<b>233 Series</b>		<b>235 Series</b>		<b>250 Series</b>	
232-102/026-000	105	233-402	40	235-753/331-000	75	250-102	57
232-124/026-000	105	233-424	40	235-754	81	250-103	57
232-132	105	233-502	40	235-754/331-000	75	250-104	57
232-132/005-000	105	233-524	40	235-756	81	250-105	57
232-132/031-000	105	<b>234 Series</b>		235-756/331-000	75	250-106	57
232-132/039-000	105	234-202	40	235-757	81	250-107	57
232-150/005-000	105	234-224	40	235-757/331-000	75	250-108	57
232-154	105	234-502	40	235-758/331-000	75	250-109	57
232-154/031-000	105	234-524	40	235-762	81	250-110	57
232-154/039-000	105	<b>235 Series</b>		235-762/331-000	75	250-111	57
232-162	106	235-100	73	235-763	81	250-112	57
232-162/031-000	106	235-101	73	235-763/331-000	75	250-113	57
232-162/039-000	106	235-101/330-000	40	235-764	81	250-114	57
232-184	106	235-102	73	235-764/331-000	75	250-115	57
232-184/031-000	106	235-103	73	235-766	81	250-116	57
232-184/039-000	106	235-104	73	235-766/331-000	75	250-117	57
232-202/026-000	105	235-105	73	235-767	81	250-118	57
232-224/026-000	105	235-106	73	235-767/331-000	75	250-119	57
232-232	105	235-107	73	235-768/331-000	75	250-120	57
232-232/031-000	105	235-108	73	235-770	73	250-121	57
232-232/039-000	105	235-109	73	235-771	73	250-122	57
232-254	105	235-110	73	235-772	73	250-123	57
232-254/031-000	105	235-148	40	235-774	73	250-124	57
232-254/039-000	105	235-148/330-000	40	235-775	73	250-202	57
232-262	106	235-200	73	235-776	73	250-202/353-604	63
232-262/031-000	106	235-300	75	235-777	73	250-202/353-604/997-404	63
232-262/039-000	106	235-316	73	235-778	73	250-203	57
232-284	106	235-400	73	235-800	73	250-203/353-604	63
232-284/031-000	106	235-401	81	235-801	81	250-203/353-604/997-404	63
232-284/039-000	106	235-401/331-000	75	235-801/331-000	75	250-204	57
232-302/026-000	106	235-402	83	235-824	43	250-204/353-604	63
232-324/026-000	106	235-402/331-000	77	235-824/331-000	43	250-204/353-604/997-405	63
232-332	105	235-403	83	235-850	73	250-205	57
232-346	105	235-403/331-000	77	<b>236 Series</b>		250-205/353-604	63
232-362	106	235-404	83	236-101	41	250-205/353-604/997-405	63
232-376	106	235-404/331-000	77	236-148	41	250-206	57
232-402/026-000	106	235-405	83	236-201	42	250-206/353-604/997-406	63
232-424/026-000	106	235-405/331-000	77	236-224	42	250-207	57
232-502/007-000	105	235-406	83	236-301	43	250-207/353-604	63
232-524/007-000	105	235-406/331-000	77	236-324	43	250-207/353-604/997-406	63
232-532/007-000	106	235-407	83	236-332	261	250-208	57
232-554/007-000	106	235-407/331-000	77	236-335	261	250-208/353-604	63
232-562/007-000	108	235-408	83	236-402/334-604	41	250-208/353-604/997-406	63
232-572/007-000	108	235-408/331-000	77	236-406/334-604	41	250-209	57
232-582/007-000	109	235-409	83	<b>243 Series</b>		250-210	57
232-592/007-000	109	235-409/331-000	77	243-110	253	250-211	57
232-732	108	235-410	83	243-112	253	250-212	57
232-732/031-000	108	235-410/331-000	77	243-113	253	250-213	57
232-732/039-000	108	235-412	83	243-144	253	250-214	57
232-732/047-000	108	235-412/331-000	77	243-204	253	250-215	57
232-746	108	235-448	41	243-208	253	250-216	57
232-746/031-000	108	235-500	73	243-211	253	250-217	57
232-746/039-000	108	235-501	81	243-212	253	250-218	57
232-746/047-000	108	235-501/331-000	75	243-304	253	250-219	57
232-762	109	235-524	42	243-308	253	250-220	57
232-762/031-000	109	235-524/331-000	42	243-504	253	250-221	57
232-762/039-000	109	235-550	73	243-508	253	250-222	57
232-772	109	235-600	73	243-742	44	250-223	57
232-772/031-000	109	235-650	75	243-748	44	250-224	57
232-772/039-000	109	235-700	73	243-804	253	250-302	55
232-832	108	235-701	75	243-808	253	250-303	55
232-832/031-000	108	235-740/331-000	75	<b>248 Series</b>		250-304	55
232-832/039-000	108	235-741/331-000	75	248-501	154	250-305	55
232-832/047-000	108	235-742	81	<b>249 Series</b>		250-306	55
232-846	108	235-742/331-000	75	249-100	132	250-307	55
232-846/031-000	108	235-743	81	249-101	161	250-308	55
232-846/039-000	108	235-743/331-000	75	249-116	160	250-309	55
232-846/047-000	108	235-744	81	249-130	173	250-310	55
232-862	109	235-744/331-000	75	249-135	242	250-311	55
232-862/039-000	109	235-745/331-000	75	249-136	144	250-312	55
232-872	109	235-746	81	249-137	148	250-313	55
232-872/039-000	109	235-746/331-000	75	249-138	142	250-314	55
<b>233 Series</b>		235-747	81	249-139	144	250-315	55
233-102	40	235-747/331-000	75	249-140	148	250-316	55
233-124	40	235-748/331-000	75	<b>250 Series</b>		250-317	55
233-202	40	235-749/331-000	75	250-102	57	250-318	55
233-224	40	235-752	81	250-103	57	250-319	55
233-331	261	235-752/331-000	75	250-104	57	250-320	55
233-332	261	235-753	81	250-105	57	250-321	55
233-335	261			250-106	57	250-322	55

## Item Number Index

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>250 Series</b>		<b>250 Series</b>		<b>260 Series</b>		<b>261 Series</b>	
250-323	55	250-1423	53	260-158	143	261-158	145
250-324	55	250-1424	53	260-159	143	261-159	145
250-402	53			260-160	143	261-160	145
250-402/350-604	61	<b>251 Series</b>		260-161	143	261-161	145
250-403	53	251-102	40	260-162	143	261-162	145
250-403/350-604	61	251-107	40	260-202	143	261-202	145
250-404	53			260-203	143	261-203	145
250-404/350-604	61	<b>252 Series</b>		260-204	143	261-204	145
250-405	53	252-102	44	260-205	143	261-205	145
250-405/350-604	61	252-110	44	260-206	143	261-206	145
250-406	53	252-152	44	260-207	143	261-207	145
250-406/350-604	61	252-160	44	260-208	143	261-208	145
250-407	53			260-209	143	261-209	145
250-407/350-604	61	<b>253 Series</b>		260-210	143	261-210	145
250-408	53	253-102	89	260-211	143	261-211	145
250-408/350-604	61	253-103	89	260-212	143	261-212	145
250-409	53	253-104	89	260-252	143	261-252	145
250-410	53	253-105	89	260-253	143	261-253	145
250-411	53	253-106	89	260-254	143	261-254	145
250-412	53	253-107	89	260-255	143	261-255	145
250-413	53	253-108	89	260-256	143	261-256	145
250-414	53	253-109	89	260-257	143	261-257	145
250-415	53	253-110	89	260-258	143	261-258	145
250-416	53	253-111	89	260-259	143	261-259	145
250-417	53	253-112	89	260-260	143	261-260	145
250-418	53	253-113	89	260-261	143	261-261	145
250-419	53	253-114	89	260-262	143	261-262	145
250-420	53	253-115	89	260-301	142	261-301	144
250-421	53	253-116	89	260-303	142	261-303	144
250-422	53			260-304	142	261-304	144
250-423	53			260-306	142	261-306	144
250-424	53	<b>254 Series</b>		260-307	142	261-307	144
250-502	59	254-451	41	260-311	142	261-311	144
250-503	59	254-498	41	260-313	142	261-313	144
250-504	59	254-551	42	260-314	142	261-314	144
250-505	59	254-574	42	260-316	142	261-316	144
250-506	59	254-651	43	260-317	142	261-317	144
250-507	59	254-674	43	260-321	142	261-321	144
250-508	59			260-323	142	261-323	144
250-509	59	<b>255 Series</b>		260-324	142	261-324	144
250-510	59	255-401	41	260-326	142	261-326	144
250-511	59	255-448	41	260-327	142	261-327	144
250-512	59	255-501	42	260-331	142	261-331	144
250-513	59	255-524	42	260-333	142	261-333	144
250-514	59	255-601	43	260-334	142	261-334	144
250-515	59	255-624	43	260-336	142	261-336	144
250-516	59			260-337	142	261-337	144
250-602	59	<b>256 Series</b>		260-341	142	261-341	144
250-603	59	256-401	41	260-343	142	261-343	144
250-604	59	256-448	41	260-344	142	261-344	144
250-605	59	256-501	42	260-346	142	261-346	144
250-606	59	256-524	42	260-347	142	261-347	144
250-607	59	256-601	43	260-351	142	261-351	144
250-608	59	256-624	43	260-353	142	261-353	144
250-609	59			260-354	142	261-354	144
250-610	59	<b>257 Series</b>		260-356	142	261-356	144
250-611	59	257-401	41	260-357	142	261-357	144
250-612	59	257-448	41	260-361	142	261-361	144
250-702	41	257-501	42	260-371	142	261-371	144
250-724	41	257-524	42	260-402	142	261-402	144
250-1402	53	257-601	43	260-404	142	261-404	144
250-1403	53	257-624	43	260-405	142	261-405	144
250-1404	53					261-422	146
250-1405	53	<b>260 Series</b>		<b>261 Series</b>		261-422/331-000	146
250-1406	53	260-102	143	261-102	145	261-422/341-000	146
250-1407	53	260-103	143	261-103	145	261-423	146
250-1408	53	260-104	143	261-104	145	261-423/331-000	146
250-1409	53	260-105	143	261-105	145	261-423/341-000	146
250-1410	53	260-106	143	261-106	145	261-424	146
250-1411	53	260-107	143	261-107	145	261-424/331-000	146
250-1412	53	260-108	143	261-108	145	261-424/341-000	146
250-1413	53	260-109	143	261-109	145	261-425	146
250-1414	53	260-110	143	261-110	145	261-425/331-000	146
250-1415	53	260-111	143	261-111	145	261-425/341-000	146
250-1416	53	260-112	143	261-112	145	261-426	146
250-1417	53	260-152	143	261-152	145	261-426/331-000	146
250-1418	53	260-153	143	261-153	145	261-426/341-000	146
250-1419	53	260-154	143	261-154	145	261-427	146
250-1420	53	260-155	143	261-155	145	261-427/331-000	146
250-1421	53	260-156	143	261-156	145	261-427/341-000	146
250-1422	53	260-157	143	261-157	145	261-428	146

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
261 Series		262 Series		264 Series		264 Series	
261-428/331-000	146	262-238	151	264-136	156	264-306	154
261-428/341-000	146	262-239	151	264-137	156	264-307	154
261-429	146	262-240	151	264-138	156	264-311	155
261-429/331-000	146	262-241	151	264-139	156	264-314	155
261-429/341-000	146	262-242	151	264-140	156	264-316	155
261-430	146	262-252	149	264-141	156	264-317	155
261-430/331-000	146	262-253	149	264-142	156	264-321	154
261-430/341-000	146	262-254	149	264-152	156	264-324	154
261-431	146	262-255	149	264-153	156	264-326	154
261-431/331-000	146	262-256	149	264-154	156	264-327	154
261-431/341-000	146	262-257	149	264-155	156	264-331	154
261-432	146	262-258	149	264-156	156	264-334	154
261-432/331-000	146	262-259	149	264-157	156	264-336	154
261-432/341-000	146	262-260	149	264-158	156	264-337	154
		262-261	149	264-159	156	264-341	155
262 Series		262-262	149	264-160	156	264-344	155
262-102	149	262-280	150	264-161	156	264-346	155
262-103	149	262-281	150	264-162	156	264-347	155
262-104	149	262-282	151	264-180	155	264-351	154
262-105	149	262-283	151	264-182	156	264-354	154
262-106	149	262-284	151	264-183	156	264-356	154
262-107	149	262-285	151	264-184	156	264-357	154
262-108	149	262-286	151	264-185	156	264-361	154
262-109	149	262-287	151	264-186	156	264-363	154
262-110	149	262-288	151	264-187	156	264-364	154
262-111	149	262-289	151	264-188	156	264-367	160
262-112	149	262-290	151	264-189	156	264-368	160
262-130	150	262-291	151	264-190	156	264-369	160
262-132	151	262-292	151	264-191	156	264-370	160
262-133	151	262-301	148	264-192	156	264-371	155
262-134	151	262-304	148	264-202	156	264-373	155
262-135	151	262-306	148	264-203	156	264-374	155
262-136	151	262-307	148	264-204	156	264-402	154
262-137	151	262-311	148	264-205	156	264-701	161
262-138	151	262-314	148	264-206	156	264-704	161
262-139	151	262-316	148	264-207	156	264-706	161
262-140	151	262-317	148	264-208	156	264-711	160
262-141	151	262-321	148	264-209	156	264-714	160
262-142	151	262-324	148	264-210	156	264-716	160
262-152	149	262-326	148	264-211	156	264-721	161
262-153	149	262-327	148	264-212	156	264-724	161
262-154	149	262-331	148	264-220	161	264-726	161
262-155	149	262-334	148	264-225	160	264-727	161
262-156	149	262-336	148	264-230	154	264-727/999-950	161
262-157	149	262-337	148	264-231	154	264-731	160
262-158	149	262-341	148	264-232	156	264-734	160
262-159	149	262-344	148	264-233	156	264-736	160
262-160	149	262-346	148	264-234	156	264-737	160
262-161	149	262-347	148	264-235	156	264-737/999-950	160
262-162	149	262-351	148	264-236	156	264-900	154
262-180	150	262-354	148	264-237	156		
262-181	150	262-356	148	264-238	156	267 Series	
262-182	151	262-357	148	264-239	156	267-101	190
262-183	151	262-361	148	264-240	156	267-109	190
262-184	151	262-363	150	264-241	156	267-110	190
262-185	151	262-371	148	264-242	156	267-113	186
262-186	151	262-373	150	264-252	156	267-114	186
262-187	151	262-402	148	264-253	156	267-115	186
262-188	151	262-402	150	264-254	156	267-119	190
262-189	151			264-255	156	267-120	190
262-190	151			264-256	156	267-123	186
262-191	151	264 Series		264-257	156	267-124	186
262-192	151	264-102	156	264-258	156	267-125	186
262-202	149	264-103	156	264-259	156	267-140	185
262-203	149	264-104	156	264-260	156	267-141	185
262-204	149	264-105	156	264-261	156	267-143	185
262-205	149	264-106	156	264-262	156	267-163	189
262-206	149	264-107	156	264-280	155	267-164	189
262-207	149	264-108	156	264-282	156	267-165	189
262-208	149	264-109	156	264-283	156	267-166	189
262-209	149	264-110	156	264-284	156	267-167	189
262-210	149	264-111	156	264-285	156	267-173	189
262-211	149	264-112	156	264-286	156	267-174	189
262-212	149	264-120	161	264-287	156	267-175	189
262-230	150	264-125	160	264-288	156	267-176	189
262-232	151	264-130	154	264-289	156	267-177	189
262-233	151	264-131	154	264-290	156	267-223	189
262-234	151	264-132	156	264-291	156	267-224	189
262-235	151	264-133	156	264-292	156	267-225	189
262-236	151	264-134	156	264-301	154	267-226	189
262-237	151	264-135	156	264-304	154	267-227	189



## Item Number Index

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>267 Series</b>		<b>280 Series</b>		<b>294 Series</b>		<b>294 Series</b>	
267-232	190	280-439	262	294-5015	126	294-8315	175
267-233	190	280-440	262	294-5022	121	294-8324	173
267-234	190	280-492	154	294-5023	122	294-8325	175
267-303	187			294-5024	124	294-8335	175
267-304	187			294-5025	126	294-8413	170
267-305	187	<b>281 Series</b>		294-5032	121	294-8415	174
267-313	187	281-492	154	294-5035	126	294-8424	172
267-314	187			294-5042	121	294-8425	174
267-315	187			294-5043	122	294-8435	174
267-324	188	<b>294 Series</b>		294-5044	124		
267-328	188	294-364	129	294-5045	126		
267-412	188	294-370	129	294-5052	121	<b>709 Series</b>	
267-422	188	294-375	129	294-5053	122	709-178	139
267-435	188	294-384	129	294-5055	126		
267-437	188	294-4002	121	294-5072	121		
267-501	191	294-4003	122	294-5075	126	<b>713 Series</b>	
267-502	191	294-4004	124	294-5093/3025-000	122	713-1103	101
267-506	191	294-4005	126	294-5094/4025-000	124	713-1103/037-000	101
267-507	191	294-4006	128	294-5095/5025-000	126	713-1103/107-000	101
267-510	191	294-4007	128	294-5095/5026-000	126	713-1118	101
267-516	191	294-4012	121	294-5095/5027-000	126	713-1118/037-000	101
267-518	191	294-4013	122	294-5113	122	713-1118/107-000	101
267-519	191	294-4014	124	294-5114	124	713-1403	101
267-520	191	294-4015	126	294-5123	122	713-1403/037-000	101
267-521	191	294-4022	121	294-5124	124	713-1403/105-000	101
		294-4023	122	294-5153	122	713-1403/107-000	101
		294-4024	124	294-5155	126	713-1403/116-000	101
		294-4025	126	294-5175	126	713-1403/117-000	101
<b>271 Series</b>		294-4032	121	294-5213	123	713-1418	101
271-120	132	294-4035	126	294-5214	125	713-1418/037-000	101
271-702	132	294-4042	121	294-5215	127	713-1418/105-000	101
271-711	132	294-4043	122	294-5223	123	713-1418/107-000	101
271-712	132	294-4044	124	294-5224	125	713-1418/116-000	101
		294-4045	126	294-5225	127	713-1418/117-000	101
<b>272 Series</b>		294-4052	121	294-5235	127	713-1423	101
272-101	132	294-4053	122	294-5253	123	713-1423/037-000	101
272-102	132	294-4055	126	294-5255	127	713-1423/105-000	101
272-102/001-000	133	294-4072	121	294-5275	127	713-1423/107-000	101
272-103	132	294-4075	126	294-5313	123	713-1423/116-000	101
272-103/001-000	133	294-4093/3025-000	122	294-5314	125	713-1423/117-000	101
272-103/101-000	133	294-4094/4025-000	124	294-5315	127	713-1438	101
272-103/201-000	133	294-4095/5025-000	126	294-5323	123	713-1438/037-000	101
272-104	132	294-4095/5026-000	126	294-5324	125	713-1438/105-000	101
272-104/001-000	133	294-4095/5027-000	126	294-5325	127	713-1438/107-000	101
272-105	132	294-4213	123	294-5335	127	713-1438/116-000	101
272-105/001-000	133	294-4214	125	294-5353	123	713-1438/117-000	101
272-112	132	294-4215	127	294-5355	127		
272-122	135	294-4223	123	294-5375	127	<b>714 Series</b>	
272-131	135	294-4224	125	294-5413	122	714-102	101
272-132	135	294-4225	127	294-5414	124	714-116	101
272-133	135	294-4235	127	294-5415	126	714-132	101
272-134	135	294-4253	123	294-5423	122	714-146	101
272-135	135	294-4255	127	294-5424	124	714-162	101
272-142	135	294-4275	127	294-5425	126	714-176	101
272-301	132	294-4313	123	294-5435	126		
272-302	132	294-4314	125	294-5453	122	<b>721 Series</b>	
272-303	132	294-4315	127	294-5455	126	721-102/008-000	104
272-304	132	294-4323	123	294-5475	126	721-102/026-000	104
272-305	132	294-4324	125	294-8013	170	721-102/031-000	104
272-312	132	294-4325	127	294-8015	174	721-102/037-000	104
272-581	134	294-4335	127	294-8022	169	721-120/008-000	104
272-582	134	294-4353	123	294-8024	172	721-120/026-000	104
272-583	134	294-4355	127	294-8025	174	721-120/031-000	104
272-584	134	294-4375	127	294-8032	169	721-120/037-000	104
272-585	134	294-4413	122	294-8035	174	721-132/001-000	104
272-592	134	294-4414	124	294-8093/3025-000	170	721-150/001-000	104
272-681	134	294-4415	126	294-8094/4025-000	172	721-162/001-000	104
272-682	134	294-4423	122	294-8095/5025-000	174	721-162/003-000	104
272-683	134	294-4424	124	294-8095/5026-000	174	721-162/100-000	104
272-684	134	294-4425	126	294-8095/5027-000	174	721-172/100-000	104
272-685	134	294-4435	126	294-8113	170	721-180/001-000	104
272-692	134	294-4453	122	294-8115	174	721-180/003-000	104
		294-4455	126	294-8124	172	721-202/008-000	107
		294-4475	126	294-8125	174	721-202/026-000	107
<b>272 Series</b>		294-5002	121	294-8135	174	721-202/031-000	107
280-432	262	294-5003	122	294-8213	171	721-202/037-000	107
280-433	262	294-5004	124	294-8215	175	721-212/008-000	107
280-434	262	294-5005	126	294-8224	173	721-212/026-000	107
280-435	262	294-5012	121	294-8225	175	721-212/031-000	107
280-436	262	294-5013	122	294-8235	175	721-212/037-000	107
280-437	262	294-5014	124	294-8313	171	721-232/001-000	107
280-438	262						

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>721 Series</b>		<b>723 Series</b>		<b>734 Series</b>		<b>736 Series</b>	
721-242/001-000	107	723-602/018-000	107	734-202/008-000	103	736-102	41
721-262/001-000	107	723-602/019-000	107	734-202/037-000	103	736-124	41
721-272/001-000	107	723-602/114-000	107	734-220	103	736-302	41
721-302/008-000	104	723-612	107	734-220/008-000	103	736-324	41
721-302/031-000	104	723-612/018-000	107	734-220/037-000	103	736-502	42
721-320/008-000	104	723-612/019-000	107	734-230	100	736-516	42
721-320/031-000	104	723-612/114-000	107	734-232	103	736-602	42
721-332/008-000	107			734-232/100-000	103	736-616	42
721-332/031-000	107			734-232/105-604	103	736-702	43
721-342/008-000	107	<b>731 Series</b>		734-242/100-000	103	736-712	43
721-342/031-000	107	731-502/008-000	105	734-242/105-604	103	736-802	43
721-432/001-000	104	731-502/031-000	105	734-250	103	736-812	43
721-450/001-000	104	731-520/008-000	105	734-262	103		
721-462/001-000	104	731-520/031-000	105	734-262/105-604	103	<b>737 Series</b>	
721-480/001-000	104	731-532/008-000	108	734-272/105-604	103	737-102	41
721-602	104	731-532/031-000	108	734-280	103	737-124	41
721-602/018-000	104	731-546/008-000	108	734-302	102	737-302	41
721-602/019-000	104	731-546/031-000	108	734-302/018-000	102	737-324	41
721-602/114-000	104	731-602	108	734-302/019-000	102	737-502	42
721-620	104	731-602/018-000	108	734-302/109-000	102	737-516	42
721-620/018-000	104	731-602/019-000	108	734-324	102	737-602	42
721-620/019-000	104	731-602/114-000	108	734-324/018-000	102	737-616	42
721-620/114-000	104	731-616	108	734-324/019-000	102	737-702	43
721-832/001-000	107	731-616/018-000	108	734-324/109-000	102	737-712	43
721-842/001-000	107	731-616/019-000	108	734-332	103	737-802	43
721-862/001-000	107	731-616/114-000	108	734-332/018-000	103	737-812	43
721-872/001-000	107	731-632	109	734-332/019-000	103		
721-2102/026-000	104	731-632/018-000	109	734-350	103	<b>738 Series</b>	
721-2102/037-000	104	731-632/019-000	109	734-350/018-000	103	738-102	41
721-2116/026-000	104	731-632/114-000	109	734-350/019-000	103	738-124	41
721-2116/037-000	104	731-642	109	734-362	102	738-302	41
721-2202/026-000	107	731-642/018-000	109	734-362/008-000	102	738-324	41
721-2202/037-000	107	731-642/019-000	109	734-362/037-000	102		
721-2212/026-000	107	731-646/114-000	109	734-372	102	<b>739 Series</b>	
721-2212/037-000	107	<b>732 Series</b>		734-372/008-000	102	739-102	41
		732-122/026-000	109	734-372/037-000	102	739-124	41
		732-132/026-000	109	734-402	102	739-152	41
<b>722 Series</b>		<b>733 Series</b>		734-402/001-000	102	739-153/100-000	41
722-102/026-000	104	733-102	101	734-412	102	739-162/100-000	41
722-120/026-000	104	733-102/037-000	101	734-412/001-000	102	739-174	41
722-132	104	733-112	101	734-432	103	739-202	42
722-132/005-000	104	733-112/037-000	101	734-432/001-000	103	739-203/100-000	42
722-132/005-000/039-000	104	733-202	101	734-442	103	739-212	42
722-132/031-000	104	733-212	101	734-442/001-000	103	739-212/100-000	42
722-132/039-000	104	733-332	101	734-462	102	739-232	42
722-132/047-000	104	733-332/100-000	101	734-462/037-000	102	739-233/100-000	42
722-150	104	733-332/105-604	101	734-484	102	739-242	42
722-150/005-000	104	733-342	101	734-484/037-000	102	739-242/100-000	42
722-150/005-000/039-000	104	733-342/100-000	101	734-502	103	739-302	40
722-150/031-000	104	733-342/105-604	101	734-502/037-000	103	739-303/100-000	40
722-150/039-000	104	733-362	101	734-520	103	739-312	40
722-150/047-000	104	733-362/105-604	101	734-520/037-000	103	739-312/100-000	40
722-202/026-000	104	733-372	101	734-532	102	739-3202	43
722-220/026-000	104	733-372/105-604	101	734-532/037-000	102	739-3212	43
722-232	104			734-554	102	739-332	40
722-232/031-000	104	<b>734 Series</b>		734-554/037-000	102	739-333/100-000	40
722-232/039-000	104	734-102	102	734-562	103	739-342	40
722-232/047-000	104	734-102/008-000	102	734-562/037-000	103	739-342/100-000	40
722-250	104	734-102/037-000	102	734-580	103		
722-250/031-000	104	734-102/107-000	102	734-580/037-000	103	<b>740 Series</b>	
722-250/039-000	104	734-124	102	<b>735 Series</b>		740-102	41
722-250/047-000	104	734-124/008-000	102	735-122	85	740-124	41
722-732	107	734-124/037-000	102	735-123	85		
722-732/031-000	107	734-124/107-000	102	735-123/001-000	85	<b>741 Series</b>	
722-732/039-000	107	734-132	102	735-126	85	741-102	41
722-732/047-000	107	734-132/100-000	102	735-126/001-000	85	741-116	41
722-742	107	734-132/105-604	102	735-127	85	741-202	41
722-742/031-000	107	734-132/108-000	102	735-127/001-000	85	741-216	41
722-742/039-000	107	734-142/100-000	102	735-302	87	741-302	42
722-742/047-000	107	734-146/105-604	102	735-303	87	741-310	42
722-832	107	734-154	102	735-303/001-000	87	741-402	42
722-832/031-000	107	734-154/108-000	102	735-304	87	741-410	42
722-832/039-000	107	734-162	102	735-306	87	741-502	43
722-832/047-000	107	734-162/105-604	102	735-306/001-000	87	741-508	43
722-842	107	734-162/108-000	102	735-306/003-000	87	741-602	43
722-842/031-000	107	734-176/105-604	102	735-307	87	741-608	43
722-842/039-000	107	734-184	102	735-307/001-000	87		
722-842/047-000	107	734-184/108-000	102	735-307/002-000	87	<b>742 Series</b>	
		734-202	103	735-500	272	742-101	41
<b>723 Series</b>						742-106	41
723-602	107					742-111	41

## Item Number Index

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>742 Series</b>		<b>750 Series</b>		<b>770 Series</b>		<b>804 Series</b>	
742-116	41	750-1504	257	770-1172	217	804-306	71
742-121	41	750-8212	257	770-1175	227	804-307	71
742-126	41			770-1303	219	804-308	71
742-153	41	<b>753 Series</b>		770-1305	227	804-309	71
742-158	41	753-646	257	770-1313	219	804-310	71
742-163	41	753-647	257	770-1315	227	804-311	71
742-168	41	753-647	257	770-1324	223	804-312	71
742-176	41			770-1325	227		
742-178	41			770-1334	223		
		<b>758 Series</b>		770-1335	227	<b>805 Series</b>	
<b>744 Series</b>		758-940/001-000	257	770-1343	219	805-102	65
744-210	40	758-940/003-000	257	770-1353	219	805-103	65
744-292	40	<b>770 Series</b>		770-1363	219	805-104	65
744-303	79	770-101	217	770-1373	219	805-105	65
744-304	79	770-111	217	770-2105	229	805-106	65
744-306	79	770-121	217	770-2115	229	805-107	65
744-307	79	770-131	217	770-2303	221	805-108	65
744-308	79	770-201	217	770-2305	229	805-109	65
744-310	79	770-202	217	770-2313	221	805-110	65
744-392	79	770-203	219	770-2315	229	805-111	65
		770-204	223	770-2324	225	805-112	65
<b>745 Series</b>		770-205	227	770-2325	229	805-113	65
745-102	41	770-212	227	770-2334	225	805-114	65
745-112	41	770-213	219	770-2335	229	805-115	65
745-152	42	770-214	223	770-2343	221	805-116	65
745-162	42	770-215	227	770-2353	221	805-117	65
745-181	44	770-221	217	770-2363	221	805-118	65
745-185	44	770-222	217	770-6223	178	805-119	65
745-191	44	770-223	219	770-6224	178	805-120	65
745-195	44	770-224	223	770-6225	179	805-121	65
745-202	43	770-225	227	770-6229	177	805-122	65
745-212	43	770-232	217	770-7102	178	805-123	65
745-281	44	770-233	219	770-7105	179	805-124	65
745-285	44	770-234	223	770-7502	178	805-152	67
745-302	42	770-235	227	770-7505	179	805-153	67
745-312	42	770-360	217			805-154	67
745-352	43	770-382	264	<b>771 Series</b>		805-155	67
745-362	43	770-383	264	771-5001/185-000	230	805-156	67
745-381	44	770-384	211	771-5001/186-000	230	805-157	67
745-385	44	770-401	178			805-158	67
745-391	44	770-502/041-000	217	<b>773 Series</b>		805-159	67
745-395	44	770-503	177	773-173	239	805-160	67
745-502/006-000	43	770-503/021-000	177	773-331	240	805-161	67
745-505/006-000	43	770-503/023-000	177	773-332	239	805-162	67
745-582	44	770-503/032-000	177	773-392	240	805-163	67
745-585	44	770-503/035-000	177	773-493	240	805-164	67
745-602/006-000	44	770-504	223	773-494	240	805-165	67
745-605/006-000	44	770-505	227	773-496	240	805-166	67
745-631	44	770-512/041-000	217	773-498	240	805-167	67
745-635	44	770-513	177	773-514	239	805-168	67
745-652/006-000	44	770-513/021-000	177			805-169	67
745-655/006-000	44	770-513/023-000	177	<b>787 Series</b>		805-170	67
745-681	44	770-513/032-000	177	787-1007	257	805-171	67
745-685	44	770-513/035-000	177	787-1012	257	805-172	67
745-1352	43	770-514	223			805-173	67
745-1362	43	770-515	227	<b>788 Series</b>		805-174	67
745-1402	44	770-643	207	788-357	257	805-302	65
745-1412	44	770-644	211			805-302/200-604	69
745-1452	44	770-645	215			805-302/200-604/997-404	69
745-1462	44	770-693	207			805-303	65
745-3102	41	770-694	211	<b>804 Series</b>		805-303/200-604	69
745-3112	41	770-695	215	804-102	71	805-303/200-604/997-405	69
745-3152	42	770-703	221	804-103	71	805-304	65
745-3162	42	770-704	225	804-104	71	805-304/200-604	69
745-3202	43	770-705	229	804-105	71	805-304/200-604/997-405	69
745-3212	43	770-713	221	804-106	71	805-305	65
745-3252	44	770-714	225	804-107	71	805-305/200-604	69
745-3262	44	770-715	229	804-108	71	805-305/200-604/997-405	69
		770-723	221	804-109	71	805-306	65
<b>746 Series</b>		770-724	225	804-110	71	805-306/200-604	69
746-2302	42	770-725	229	804-111	71	805-306/200-604/997-406	69
746-2312	42	770-733	221	804-112	71	805-307	65
		770-734	225	804-113	71	805-307/200-604	69
<b>750 Series</b>		770-735	229	804-114	71	805-307/200-604/997-406	69
750-495	257	770-1102	217	804-115	71	805-308	65
750-600	257	770-1105	227	804-116	71	805-308/200-604	69
750-640	257	770-1112	217	804-302	71	805-308/200-604/997-406	69
750-652	257	770-1115	227	804-303	71	805-309	65
750-1405	257	770-1162	217	804-304	71	805-310	65
		770-1165	227	804-305	71	805-311	65
						805-312	65

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>805 Series</b>		<b>862 Series</b>		<b>862 Series</b>		<b>2059 Series</b>	
805-313	65	862-652	138	862-9605	139	2059-189	263
805-314	65	862-662	138	862-9615	139	2059-301/998-403	13
805-315	65	862-693	138	862-9625	139	2059-302/998-403	13
805-316	65	862-694	139	862-9633	138	2059-303/998-403	13
805-317	65	862-1503	138	862-9634	139	2059-321/998-403	13
805-318	65	862-1504	139	862-9693	138	2059-322/998-403	13
805-319	65	862-1505	139	862-9694	139	2059-323/998-403	13
805-320	65	862-1515	139			2059-901	21
805-321	65	862-1525	139			2059-901/018-000	21
805-322	65	862-1532	138	<b>873 Series</b>		2059-901/021-000	21
805-323	65	862-1533	138	873-902	192	2059-902	21
805-324	65	862-1534	139	873-903	192	2059-902/018-000	21
805-352	67	862-1552	138	873-953	193	2059-902/021-000	21
805-353	67	862-1562	138			2059-903	21
805-354	67	862-1593	138	<b>890 Series</b>		2059-903/018-000	21
805-355	67	862-1594	139	890-101	201	2059-903/021-000	21
805-356	67	862-1603	138	890-111	201	2059-904	21
805-357	67	862-1604	139	890-121	201	2059-904/018-000	21
805-358	67	862-1605	139	890-131	201	2059-904/021-000	21
805-359	67	862-1615	139	890-202	201		
805-360	67	862-1625	139	890-203	205	<b>2060 Series</b>	
805-361	67	862-1632	138	890-204	209	2060-189	263
805-362	67	862-1633	138	890-205	213	2060-451/998-404	15
805-363	67	862-1634	139	890-212	201	2060-452/998-404	15
805-364	67	862-1652	138	890-213	205	2060-453/998-404	15
805-365	67	862-1662	138	890-214	209	2060-471/998-404	15
805-366	67	862-1693	138	890-215	213	2060-472/998-404	15
805-367	67	862-1694	139	890-222	201	2060-473/998-404	15
805-368	67	862-2503	138	890-223	205	2060-852/998-404	17
805-369	67	862-2504	139	890-224	209	2060-872/998-404	17
805-370	67	862-2505	139	890-225	213	2060-951/028-000	23
805-371	67	862-2515	139	890-232	201	2060-952/028-000	23
805-372	67	862-2525	139	890-233	205	2060-953/028-000	23
805-373	67	862-2532	138	890-234	209	2060-954/028-000	23
805-374	67	862-2533	138	890-235	213	2060-962/028-000	23
		862-2534	139	890-310	201	2060-1451/998-404	47
		862-2552	138	890-311	201	2060-1452/998-404	47
<b>806 Series</b>		862-2562	138	890-382	264	2060-1453/998-404	47
806-102	44	862-2593	138	890-383	264	2060-1471/998-404	47
806-112	44	862-2594	139	890-384	264	2060-1472/998-404	47
		862-2603	138	890-385	264	2060-1473/998-404	47
<b>816 Series</b>		862-2604	139	890-502	201	2060-1852/998-404	49
816-102	41	862-2605	139	890-503	205	2060-1872/998-404	49
816-112	41	862-2615	139	890-504	209		
		862-2625	139	890-505	213	<b>2061 Series</b>	
<b>831 Series</b>		862-2632	138	890-512	201	2061-189	263
831-3102	109	862-2633	138	890-513	205	2061-601/998-404	19
831-3102/037-000	109	862-2634	139	890-514	209	2061-602/998-404	19
831-3109	109	862-2652	138	890-515	213	2061-603/998-404	19
831-3109/037-000	109	862-2662	138	890-642	203	2061-621/998-404	19
831-3202	109	862-2693	138	890-692	203	2061-622/998-404	19
831-3202/007-000	109	862-2694	139	890-702	203	2061-623/998-404	19
831-3209	109	862-8503	138	890-703	207	2061-901	25
831-3209/007-000	109	862-8504	139	890-704	211	2061-901/034-000	25
831-3602	109	862-8505	139	890-705	215	2061-902	25
831-3609	109	862-8515	139	890-712	203	2061-902/034-000	25
831-3622	109	862-8525	139	890-713	207	2061-903	25
831-3629	109	862-8533	138	890-714	211	2061-903/034-000	25
		862-8534	139	890-715	215	2061-904	25
<b>862 Series</b>		862-8593	138	890-722	203	2061-904/034-000	25
862-482	138	862-8594	139	890-723	207	2061-1601/998-404	51
862-503	138	862-8603	138	890-724	211	2061-1602/998-404	51
862-504	139	862-8604	139	890-725	215	2061-1603/998-404	51
862-505	139	862-8605	139	890-732	203	2061-1621/998-404	51
862-515	139	862-8615	139	890-733	207	2061-1622/998-404	51
862-525	139	862-8625	139	890-734	211	2061-1623/998-404	51
862-532	138	862-8633	138	890-735	215	2061-1641/998-404	51
862-533	138	862-8634	139	890-1102	201	2061-1642/998-404	51
862-534	139	862-8693	138	890-1105	213	2061-1643/998-404	51
862-552	138	862-8694	139	890-1112	201	2061-1661/998-404	51
862-562	138	862-9503	138	890-1115	213	2061-1662/998-404	51
862-593	138	862-9504	139	890-2102	203	2061-1663/998-404	51
862-594	139	862-9505	139	890-2105	215		
862-603	138	862-9515	139	890-2112	203	<b>2065 Series</b>	
862-604	139	862-9525	139	890-2115	215	2065-100/998-403	11
862-605	139	862-9533	138			2065-101/998-403	11
862-615	139	862-9534	139	<b>2007 Series</b>		2065-131	27
862-625	139	862-9593	138	2007-8874	257	2065-133	27
862-632	138	862-9594	139	2007-8877	257	2065-189	11
862-633	138	862-9603	138				
862-634	139	862-9604	139				

## Item Number Index

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>2070 Series</b>		<b>2231 Series</b>		<b>2604 Series</b>		<b>2624 Series</b>	
2070-400	33	2231-102/026-000	105	2604-3102	93	2624-3112	97
2070-451/998-406	30	2231-102/031-000	105	2604-3103	93	2624-3302	97
2070-452/998-406	30	2231-102/037-000	105	2604-3104	93	2624-3303	97
2070-453/998-406	30	2231-102/102-000	105	2604-3105	93	2624-3304	97
2070-461/998-406	29	2231-124/008-000	105	2604-3106	93	2624-3305	97
2070-462/998-406	29	2231-124/026-000	105	2604-3107	93	2624-3306	97
2070-463/998-406	29	2231-124/031-000	105	2604-3108	93	2624-3307	97
2070-521/998-406	31	2231-124/037-000	105	2604-3109	93	2624-3308	97
2070-522/998-406	31	2231-124/102-000	105	2604-3110	93	2624-3309	97
2070-523/998-406	31	2231-202/008-000	108	2604-3111	93	2624-3310	97
2070-541/998-406	32	2231-202/026-000	108	2604-3112	93	2624-3311	97
2070-542/998-406	32	2231-202/031-000	108	2604-3302	93	2624-3312	97
2070-543/998-406	32	2231-202/037-000	108	2604-3303	93	2624-3502	97
		2231-216/008-000	108	2604-3304	93	2624-3503	97
		2231-216/026-000	108	2604-3305	93	2624-3504	97
<b>2075 Series</b>		2231-216/031-000	108	2604-3306	93	2624-3505	97
2075-381/997-404	35	2231-216/037-000	108	2604-3307	93	2624-3506	97
		2231-302/008-000	106	2604-3308	93	2624-3507	97
		2231-302/026-000	106	2604-3309	93	2624-3508	97
<b>2091 Series</b>		2231-302/031-000	106	2604-3310	93	2624-3509	97
2091-1102	111	2231-302/037-000	106	2604-3311	93	2624-3510	97
2091-1102/002-000	111	2231-302/107-000	106	2604-3312	93	2624-3511	97
2091-1112	111	2231-316/107-000	106	2604-3502	93	2624-3512	97
2091-1112/002-000	111	2231-324/008-000	106	2604-3503	93		
2091-1122	111	2231-324/026-000	106	2604-3504	93	<b>2706 Series</b>	
2091-1132	111	2231-324/031-000	106	2604-3505	93	2706-102	42
2091-1152	113	2231-324/037-000	106	2604-3506	93	2706-112	42
2091-1162	113	2231-702/008-000	109	2604-3507	93	2706-152	42
2091-1172	113	2231-702/026-000	109	2604-3508	93	2706-162	42
2091-1182	113	2231-702/031-000	109	2604-3509	93	2706-202	43
2091-1302	111	2231-702/037-000	109	2604-3510	93	2706-212	43
2091-1308	111	2231-712/008-000	109	2604-3511	93	2706-252	43
2091-1322	111	2231-712/026-000	109	2604-3512	93	2706-262	43
2091-1328	111	2231-712/031-000	109			2706-302	44
2091-1352	113	2231-712/037-000	109	<b>2624 Series</b>		2706-312	44
2091-1362	113			2624-1101	95		
2091-1372	113	<b>2273 Series</b>		2624-1102	95	<b>2716 Series</b>	
2091-1382	113	2273-202	237	2624-1103	95	2716-102	43
2091-1402	111	2273-203	237	2624-1104	95	2716-108	43
2091-1412	111	2273-204	237	2624-1105	95	2716-152	43
2091-1432	111	2273-205	237	2624-1106	95	2716-158	43
2091-1522/002-000	111	2273-208	237	2624-1107	95	2716-202	44
2091-1528/002-000	111	2273-500	237	2624-1108	95	2716-208	44
2091-1600	113	<b>2604 Series</b>		2624-1109	95	2716-252	44
2091-1600/002-000	113	2604-1101	91	2624-1110	95	2716-258	44
2091-1603	113	2604-1102	91	2624-1111	95		
2091-1603	113	2604-1103	91	2624-1112	95	<b>2721 Series</b>	
2091-1632/024-000	111	2604-1104	91	2624-1302	95	2721-102/008-000	104
2091-1638/002-000	111	2604-1105	91	2624-1303	95	2721-102/026-000	104
<b>2092 Series</b>		2604-1106	91	2624-1304	95	2721-102/031-000	104
2092-1152	113	2604-1107	91	2624-1305	95	2721-102/037-000	104
2092-1162	113	2604-1108	91	2624-1306	95	2721-120/008-000	104
2092-1172	113	2604-1109	91	2624-1307	95	2721-120/026-000	104
2092-1182	113	2604-1110	91	2624-1308	95	2721-120/031-000	104
2092-1352	113	2604-1111	91	2624-1309	95	2721-120/037-000	104
2092-1362	113	2604-1112	91	2624-1310	95	2721-202/008-000	107
2092-1372	113	2604-1302	91	2624-1311	95	2721-202/026-000	107
2092-1382	113	2604-1303	91	2624-1312	95	2721-202/031-000	107
2092-1600	113	2604-1304	91	2624-1502	95	2721-202/037-000	107
2092-1600/002-000	113	2604-1305	91	2624-1503	95	2721-212/008-000	107
2092-1603	113	2604-1306	91	2624-1504	95	2721-212/026-000	107
2092-1603/002-000	113	2604-1307	91	2624-1505	95	2721-212/031-000	107
2092-1630	111	2604-1308	91	2624-1506	95	2721-212/037-000	107
2092-1630	113	2604-1309	91	2624-1507	95		
2092-3152	113	2604-1310	91	2624-1508	95	<b>2734 Series</b>	
2092-3155	113	2604-1311	91	2624-1509	95	2734-102	102
2092-3172	113	2604-1312	91	2624-1510	95	2734-102/031-000	102
2092-3175	113	2604-1502	91	2624-1511	95	2734-102/037-000	102
2092-3352	113	2604-1503	91	2624-1512	95	2734-102/107-000	102
2092-3355	113	2604-1504	91	2624-3101	97	2734-124	102
2092-3372	113	2604-1505	91	2624-3102	97	2734-124/031-000	102
2092-3375	113	2604-1506	91	2624-3103	97	2734-124/037-000	102
2092-3600	113	2604-1507	91	2624-3104	97	2734-124/107-000	102
2092-3600/002-000	113	2604-1508	91	2624-3105	97	2734-202	103
2092-3603	113	2604-1509	91	2624-3106	97	2734-202/031-000	103
2092-3603/002-000	113	2604-1510	91	2624-3107	97	2734-202/037-000	103
		2604-1511	91	2624-3108	97	2734-220	103
<b>2231 Series</b>		2604-1512	91	2624-3109	97	2734-220/031-000	103
2231-102/008-000	105	2604-3101	93	2624-3110	97	2734-220/037-000	103
				2624-3111	97		

Item No.	Page	Item No.	Page	Item No.	Page	Item No.	Page
<b>2759 Series</b>							
2759-204/261-1000	257						
2759-2101/271-1000	257						
2759-2102/271-1000	257						
2759-2103/271-1000	257						
<b>2773 Series</b>							
2773-402	243						
2773-403	243						
2773-404	243						
2773-405	243						
2773-406	243						
2773-408	243						
2773-500	243						
<b>2851 Series</b>							
2851-8201	257						
2851-8202	257						
<b>2852 Series</b>							
2852-7101	257						
2852-7102	257						
2852-7201	257						
2852-7202	257						
2852-7203	257						
2852-7204	257						
2852-7205	257						
2852-7206	257						
2852-7207	257						
2852-7207	257						
2852-7208	257						
2852-7210	257						
2852-7213	257						
2852-7214	257						
2852-7214	257						
2852-7215	257						
2852-7220	257						
2852-7221	257						
2852-7225	257						
2852-7230	257						
2852-7231	257						
2852-7232	257						
2852-7233	257						
2852-7301	257						
2852-7901	257						



# WAGO Worldwide Companies and Representatives

**Algeria**  
please contact WAGO France

**Argentina**  
Bruno Schillig S.A.  
Arenales 4030, B1604CFD  
Florida, PBA  
Phone +54 11 4730 1100  
Fax +54 11 4761 7244  
wago@schillig.com.ar

**Armenia**  
ROOT ITSP LLC  
33 Halabyan str.  
0038, Yerevan  
info@root.am

**Australia**  
WAGO Pty. Ltd.  
2-4 Overseas Drive  
Noble Park Victoria 3174  
Phone +61 03 8791 6300  
Fax +61 03 9701 0177  
sales.anz@wago.com

**Austria**  
WAGO Kontakttechnik Ges.m.b.H.  
Europaring F15 602  
Campus 21  
2345 Brunn am Gebirge  
Phone +43 1 6150780  
Fax +43 1 6150775  
wago-at@wago.com

**Azerbaijan**  
AZ Technics LTD  
Zulfi V. Alizade  
Y.Safarov str.33, AZ1025,  
Baku  
Phone +994 50 210 24 49  
Fax +994 12 496 83 34  
info@AZtechnics.az

**Bangladesh**  
please contact WAGO India

**Belarus**  
DemsEnergo LLC  
Smolyachkova Str. 16, Office 2  
220005 Minsk  
Phone: +375 17 2102189  
Fax: +375 17 2102189  
dems@dems.by

ATAVA Techno Ltd.  
Ul. Denisovskaya 47, Office 1  
220006 Minsk  
Phone: +375173881018  
atava@atava.by

**Belgium**  
WAGO BeLux nv  
Excelsiorlaan 11  
1930 Zaventem  
Phone +32 2 717 9090  
Fax +32 2 717 9099  
info-be@wago.com

**Bolivia**  
ISOTEK S.R.L.  
Zona Casco Viejo  
Calle Isso #578, B/San Roque  
Santa Cruz  
Phone +591 721 000 27  
info@isotek.bo

**Bosnia & Herzegovina**  
please contact WAGO Bulgaria

AM-ELEKTRIK doo  
Dzemala Bijedica 160F  
71000 Sarajevo  
Phone +38762 59 99 54  
Fax +38733 92 23 89  
info@amelektrik.com  
www.am-elektrik.com

**Brazil**  
WAGO Eletroeletrônicos Ltda  
Rua Tripoli, 640, Lotamento Multivias II  
Jardim Ermiida I  
Jundiaí - SP  
CEP 13212-217  
Phone +55 (11) 2923 7200  
info.br@wago.com

**Bulgaria**  
WAGO Kontakttechnik GmbH & Co. KG  
Representative Office Sofia  
Business Center Serdika  
2E Akad. Ivan Geshov Blvd.  
Building 1, Floor 4, Office 417  
1330 Sofia  
Phone +359 2 489 46 09/10  
Fax +359 2 928 28 50  
info-BG@wago.com

**Canada**  
WAGO Canada, Inc.  
1550 Yorkton Court - Unit 1  
Burlington, ON L7P 5B7  
Phone +1-888-9246-221  
info.ca@wago.com

**Chile**  
Desimat Chile  
Av Puerto Vespucio 9670  
Pudahuel Santiago  
Phone +56 2 747 0152  
Fax +56 2 747 0153  
ventaschile@desimat.cl

**China**  
WAGO Electronic (Tianjin) Co., Ltd.  
No.5, Quan Hui Road  
Wuqing Development Area  
Tianjin 301700  
Phone +86 22 5967 7688  
Fax +86 22 5961 7668  
info-cn@wago.com

**Colombia**  
T.H.L. Ltda.  
Cra. 49 B # 91-33  
Bogotá  
Phone +57 1 621 85 50  
Fax +57 1 621 60 28  
ventas-thl2@thl.com.co

**Croatia**  
M.B.A. d.o.o.  
Frana Supila 5  
51211 Matulji  
Phone +385 51 275-736  
Fax +385 51 275-066  
mba@ri.htnet.hr

MICROSTAR d.o.o.  
Siget 18 b  
10020 Zagreb  
Phone +385 1 3647 849  
Fax +385 1 3636 662  
wago@microstar.hr

**Czech Republic**  
WAGO Elektro spol. sr. o.  
Rozvodova 1116/36  
143 00 Praha 4 - Modřany  
Phone +420 261 090 143  
Fax +420 261 090 144  
info.cz@wago.com  
wago-cz@wago.com

**Denmark**  
WAGO Denmark A/S  
Lejrvej 17  
3500 Værløse  
Phone +45 44 357 777  
info.dk@wago.com

**Ecuador**  
ECUAINSETEC CIA LTDA  
Yugoslavia N34-110 y Azuay  
Quito  
Phone +593 2 24 50 475  
Fax +593 2 22 51 242  
g.castro@ecuainsetec.com.ec

**Egypt**  
IBN Engineering / Distributor  
(Automation Products)  
Phone +2 02 3721 4350  
Fax +2 02 3722 1709  
nasrelw@ibnengineering.com

**Estonia**  
Eltarko OÜ  
Treali tee 2 door 6  
Peetri küla  
Rae vald  
75312 Harjumaa  
Phone +372 651 7731  
Fax +372 651 7786  
andres@eltarko.ee

**Finland**  
WAGO Finland Oy  
Perintötie 2 C  
01510 Vantaa  
Phone +358 9 7744 060  
Fax +358 9 7744 0660  
tilaus@wago.fi

**France**  
WAGO Contact SAS  
Paris Nord 2  
83 Rue des Chardonnerets  
93290 - Tremblay en France  
B.P. 95947 - ROISSY CDG CEDEX  
Phone +33 1 4817 2590  
Fax +33 1 4863 2520  
info-fr@wago.com

**Germany**  
WAGO Kontakttechnik GmbH & Co. KG  
Hansastraße 27  
32423 Minden  
Phone +49 571 887-0  
Fax +49 571 887-169  
info@wago.com

WAGO Kontakttechnik GmbH & Co. KG  
Waldstraße 1  
99706 Sondershausen  
Phone +49 3632 659-0  
Fax +49 3632 659-100  
info@wago.com

**Great Britain**  
WAGO Limited  
Triton Park, Swift Valley Industrial Estate  
RUGBY  
Warwickshire, CV21 1SG  
Phone +44 1788 568 008  
Fax +44 1788 568 050  
uksales@wago.com

**Greece**  
PANAGIOTIS SP. DIMOULAS  
DIMOULAS AUTOMATIONS  
Kriti Str. 26  
10439 Athens  
Phone +30 210 883 3337  
Fax +30 210 883 4436  
wago.info@dimoulas.com.gr

**Honduras**  
CILASAS S.A. de C.V.  
Barrio Los Andes  
7 Calle entre 14 y 15 Ave. N.O.  
P.O. Box. 1061  
San Pedro Sula  
Phone +504 2557 1146/7  
Fax +504 2557 1149  
ventas@ieclasa.com

**Hong Kong**  
National Concord Eng., Ltd.  
Unit A-B, 5/F.  
Southeast Industrial Building  
611-619 Castle Peak Road  
Tsuen Wan, N.T.  
Phone +852 2429 2611  
Fax +852 2429 2164  
sales@nce.com.hk

**Hungary**  
WAGO Hungária KFT  
Ipári Park, Gyár u. 2  
2040 Budapest  
Phone +36 23 502-170  
Fax +36 23 502-166  
info.hu@wago.com

**Iceland**  
Johan Rönning ehf / S.Gudjonsson  
Smíðjuvegur 3  
200 Kopavogur  
Phone +354 520-4500  
Fax +354 520-4501  
export@wago.com

**India**  
WAGO Private Limited  
C-27, Sector-58, Phase-III  
Noida-201 301  
Gautam Budh Nagar (U.P)  
Phone +91 120 438 8700  
Fax +91 120 438 8799  
info.india@wago.com

**Indonesia**  
please contact WAGO Singapore

**Iraq**  
please contact WAGO Middle East

**Ireland**  
Drives & Controls  
Unit F4, Riverview Business Park  
Nangor Road  
Dublin 12  
Phone +353 1 4604474  
Fax +353 1 4604507  
info@drivesandcontrols.ie

**Israel**  
Contel Israel Electronic Solutions Ltd.  
Bet Hapaamon  
20 Hataas Street  
P.O. Box 66  
44425 Kefar-Saba  
Phone +972 9 76 77 240  
Fax +972 9 76 77 243  
sales@comPhoneco.il

**Italy**  
WAGO Elettronica SRL a Socio Unico  
Via Parini 1  
40033 Casalecchio di Reno (BO)  
Phone +39 051 6132112  
Fax +39 051 6272174  
info-ita@wago.com

**Japan**  
WAGO Co. of JAPAN Ltd.  
Kinsicho Prime Tower  
1-5-7, Kameido, Koto-ku  
Tokyo 136-0071  
Phone +81 3 5627 2050  
Fax +81 3 5627 2055  
info-jp@wago.com

**Jordan**  
Oxgen for Engineering Systems Co. L.L.C  
P.O. Box: 2154 Amman  
11953 Jordan  
Phone +962 79 9 860 869  
Fax +962 655 211 89  
info@oxgn-grp.com

**Kazakhstan**  
Axima LLP  
232/2, Ryskulov avenue  
050061 Almaty  
Phone +7 727 356 52 91/92/93  
Fax +7 727 327 14 92/93  
trade1@axima.kz  
or@axima.kz

TOO Technik-Trade  
ul. i. A. Protosanova, 81  
070004 Ust-Kamenogorsk  
Phone +7 7232 254 064  
Fax +7 7232 253 251  
info@technik.kz

**Korea**  
WAGO Korea Co., Ltd.  
Room 205 AnyangMegaValley,  
268, Hagui-ro, Dongan-gu, Anyang-si,  
Gyeonggi-do, 14056, South Korea  
Phone +82 31 421 9500  
info.korea@wago.com

**Kosovo**  
please contact WAGO Bulgaria

**Latvia**  
INSTABALT LATVIA SIA  
Vestienas iela 6  
Riga, LV-1035  
Phone +371 6790 1188  
Fax +371 6790 1180  
info@instabalt.lv

**Lebanon**  
Gemayel Trading & Contracting  
Rue 55, Antoninis Project-Bloc L  
P.O. BOX 70-1096  
Antelias, Lebanon  
Phone +961 3 22 30 29  
Fax +961 4 52 10 29  
info@gtclb.com

**Lithuania**  
INSTABALT LIT UAB  
Savanorių 187  
Vilnius, 2053  
Phone +370 52 322 295  
Fax +370 52 322 247  
info@instabalt.lt

**Luxembourg**  
please contact WAGO Belgium

**Malaysia**  
WAGO Representative Office Malaysia  
No 806, Block A4, Leisure Commerce Square,  
No 9, Jalan PJS 8/9, 46150 Petaling Jaya,  
Selangor Darul Ehsan, Malaysia  
Phone +60 3 7877 1776  
Fax +60 3 7877 2776  
kian.guan.tan@wago.com

HPH Materials (M) Sdn Bhd  
No. 4, Jalan Nilam 1/6  
Suban Hi-Tech Industrial Park  
40000 Shah Alam  
Selangor, D.E. Malaysia  
Phone +60 3 5638 2213  
Fax +60 3 5638 8213  
info@hphmaterials.com

**Macedonia**  
please contact WAGO Bulgaria

Kompiunet Inzenering  
Vladimir Komarov 1A-3/9  
1000 Skopje  
Phone +389 2 521 12 00

**Maldives**  
please contact WAGO India

**Mexico**  
WAGO SA de CV  
Carretera estatal 431 Km. 2+200  
Lote 99 Módulo 6  
Parque Industrial Tecnológico Innovación  
Querétaro  
El Marqués, Qro. 76246  
Phone +52 442 221 5946  
Fax +52 442 221 5063  
info.mx@wago.com

**Moldova**

Smart Delight SRL  
Bulgara Str. 9/6  
2001 Chisinau  
Moldau  
Phone +373 (373) 69 10 22 01  
alexandres@starnet.md

**Morocco**

Automatisme & Connection Maroc  
23, Rue Boured  
2ème étage, appt4  
Roche Noire  
20300 Casablanca  
Phone +212 522 24 21 72/73  
Fax +212 522 24 21 75  
info-fr@wago.com

**Nepal**

please contact WAGO India

**Netherlands**

WAGO Nederland B.V.  
Laan van de Ram 19  
7234 BW APELDOORN  
Phone +31 55 36 83 500  
Fax +31 55 36 83 599  
info-nl@wago.com

**New Zealand**

please contact WAGO Australia

Engineering Computer Services Ltd  
7-19 Ruffell Rd  
Hamilton, 3200  
New Zealand  
Phone +64 (0) 7 849 2211  
Fax +64 (0) 7 849 2220  
sales@ecsnz.com

**Nigeria**

GIL Automations Ltd.  
Daily Times Complex  
2 Lateef Jakande Rd., Agidingbi  
100271 Ikeja, Lagos State  
Phone +234 17132672335  
sales@gilautomation.com

**Norway**

WAGO Norge AS  
Jerikoveien 20  
1067 Oslo  
Phone +47 22 30 94 50  
Fax +47 22 30 94 51  
info.no@wago.com

**Oman**

please contact WAGO Middle East

**Pakistan**

FuziLogiX Automation & Control  
Suit No. 14, 5th Floor, Shan Arcade  
New Garden Town, Lahore  
Phone +92 42 594 1503 - 4  
Fax +92 42 585 1431  
info@fuzilogix.com

**Pakistan**

S.A. Hamid & Co.  
7 Brandreth Road  
Lahore, 54000  
Phone +92 42 376 500 99  
Fax +92 42 376 513 91  
sales@sahamid.com

**Paraguay**

AESA  
Av. Madame Lynch  
c/Antolin Irala  
2309 Asunción  
Phone +59 521674524  
info@aesa.com.py

**Philippines**

please contact WAGO Singapore

**Poland**

WAGO ELWAG sp. z o. o.  
ul. Piękna 58 a  
50-506 Wrocław  
Phone +48 71 3602970  
Fax +48 71 3602999  
wago.elwag@wago.com

**Portugal**

MORGADO & CA. LDA - SEDE  
Estrada Exterior da  
Circunvalação 3558/3560  
Apartado 1057  
4435 Rio Tinto  
Phone +351 22 9770600  
Fax +351 22 9770699  
geral@morgadocl.pt

**Quatar**

GEBD - Gulf European Business  
Development - Company W.L.L.)  
PO Box: 20 000  
Doha, Quatar  
Phone +974 5591 5682  
info@gebd.com

**Romania**

WAGO Kontakttechnik GmbH & Co. KG  
Representative Office Romania  
Sos. Pipera-Tunari nr. 1/1  
building 1, 2nd floor  
077190 Voluntari, Ilfov  
Phone +40-(0)31 421 85 68  
info-RO@wago.com

**VDR & Servicii srl**

Str. Valeriu Braniște, nr. 60, ap.1,  
sector 3  
Phone +40 21 322 5074/76  
Fax +40 21 322 5075  
office@componente-automatizari.ro

**Russia**

OOO WAGO Contact Rus  
Ilinskaya strret 5, bldg. 2  
127576 Moscow  
Phone +7 495 223-4747  
info.ru@wago.com  
www.wago.ru

**OOO Prosoft**

ul. Profsouznyaya, 108  
117437 Moscow  
Phone +7 495 2340636  
Fax +7 495 2340640  
info@prosoft.ru

**Saudi Arabia**

Saudi Electronic Trading  
P.O. Box 60712  
Riyadh 11555  
Phone +966 11 2063 377  
Fax +966 11 4633 297  
info@setra.com.sa

**Serbia**

please contact WAGO Bulgaria

**Mehatronik Sistem d.o.o.**

Bul. Oslobođenja 30  
32000 Cacak  
Phone +381 (0)32 310 088  
Fax +381 (0)32 371 571  
Mobil +381 (0)64 877 22 02  
office@mehatronik.com

**Sigma Controls Engineering doo**

Jovana Skerlica 22  
18000 Nis  
Mobil +381 (0)63 403 104  
wago@sce.rs  
www.sce.rs

**Singapore**

WAGO Electronic Pte Ltd  
138 Joo Seng Road #06-01  
Singapore 368361  
Phone +65 62866776  
Fax +65 62842425  
info-sing@wago.com  
www.wago.sg

**Slovakia**

Proelektro spol. s r.o.  
Na barine 22  
841 03 Bratislava - Lamač  
Phone +421 2 4569 2503  
info@wago.sk

**Slovenia**

IC elektronika d.o.o.  
Vodovodna cesta 100  
1000 Ljubljana  
Phone: +386 1568 01 26  
Fax: +386 1568 91 07  
info@ic-elect.si

**South Africa**

Shorrock Automation CC  
Nellmapius drive  
5 Regency Drive, Route 21 Corp. Park  
0051 Centurion  
Phone +27 12 4500300  
Fax +27 12 4500322  
sales@shorrock.co.za

**Spain**

DICOMAT S.L.  
Avda. de la Industria, 36  
Apartado Correos, 1.178  
28108-Alcobendas (Madrid)  
Phone +34 91 662 1362  
Fax +34 91 661 0089  
info@dicomat-asetyc.com

**Sri Lanka**

please contact WAGO India

**Sweden**

WAGO Sverige AB  
Box 11127, 161 11 BROMMA  
Besöksadress: Adolfsbergsv. 31  
Phone +46 858410680  
info.se@wago.com

**Switzerland**

WAGO CONTACT SA  
Rte. de l'Industrie 19  
Case Postale 168  
1564 Domdidier  
Phone +41/26 676 75 00  
Fax +41/26 676 75 01  
info.switzerland@wago.com

**Syria**

please contact WAGO Middle East

**Taiwan R.O.C.**

WAGO Contact, Ltd.  
5F., No.168, Jianshang Rd  
Zhonghe City  
Taipei County 23585, Taiwan  
Phone +886 2 2225 0123  
Fax +886 2 2225 1511  
info.taiwan@wago.com

**Thailand**

WAGO Representative Office Thailand  
4th Floor, KS Building  
213/6-8 Rachada-Phisek Road  
Dingdaeng, Bangkok 10400  
Phone +66 2 6935611  
Fax +66 2 6935612  
warongkon.khankham@wago.com

**US Power Distribution Co., Ltd.**

4th Floor, KS Building  
213/6-8 Rachada-Phisek Road  
Dingdaeng, Bangkok 10400  
Phone +66 2 2763040  
Fax +66 2 2763049  
uspowers2014@gmail.com

**Itthirit Technology Co., Ltd.**

Vision Business Park 2 Floor 4  
Soi Raminthra 55/8, Watcharapon Road  
Tharaeng, Bangkok District  
Bangkok Thailand 10220  
Phone +66 2 347 0780  
Fax +66 2 347 0772  
sales@itthirittechnology.com

**Tunisia**

please contact WAGO France

**Turkey**

WAGO Elektronik Sanayi ve Ticaret Ltd. Şti.  
Tatlısu Mahallesi Arif Ay Sokak No: 10  
34775 Ümraniye - İstanbul  
Phone +90 216 472 1133  
Fax +90 216 472 9910  
info.tr@wago.com

**Ukraine**

NPP Logicon  
Predslavinskaya street, 39, Office 303  
03150 Kiev  
Phone +380 44 5228019  
Fax +380 44 2611803  
info@logicon.ua

**Micropribor Ltd.**

4, Krzhizhanovsky Str.  
03142 Kiev  
Phone +380 44 392 93 86  
Fax +380 44 392 93 87  
sales@micropribor.kiev.ua

**United Arab Emirates (UAE)**

WAGO Middle East (FZC)  
SAIF Zone, Q4-282  
P.O. Box 120665  
Sharjah, UAE  
Phone +971 6 5579920  
Fax +971 6 5579921  
info.uae@wago.com

**Uruguay**

Fivisa Electricidad  
Avda. Uruguay 1274  
11100 Montevideo  
Phone +59 829 020 808  
Fax +59 829 021 230  
info@fivisa.com.uy

**USA**

WAGO CORPORATION  
N120 W19129 Freistadt Road  
Germantown, WI 53022  
Phone +1 262 255 6222  
Fax +1 262 255 3232  
Toll-Free: 1-800 DIN Rail (346-7245)  
info.us@wago.com

**Venezuela**

PETROBORNAS, C.A.  
C.C. PLAZA AEROPUERTO - PISO 1 - LOCAL  
P1-B-03  
(8015) UNARE - PUERTO ORDAZ -  
ESTADO BOLIVAR  
REPÚBLICA BOLIVARIANA DE  
VENEZUELA  
Phone +58 286 951 3382  
Fax +58 286 951 3382  
info@petrobornas.com

**Vietnam**

please contact WAGO Germany (Minden)

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Current addresses at www.wago.com

## 12

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

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## Notes

12

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**WAGO Kontakttechnik GmbH & Co. KG**

Postfach 2880 · D · 32385 Minden  
Hansastraße 27 · D · 32423 Minden  
[info@wago.com](mailto:info@wago.com)  
[www.wago.com](http://www.wago.com)

Headquarters	+49 571 887 - 0
Sales	+49 571 887 - 44222
Order Service	+49 571 887 - 44333
Fax	+49 571 887 - 844169

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