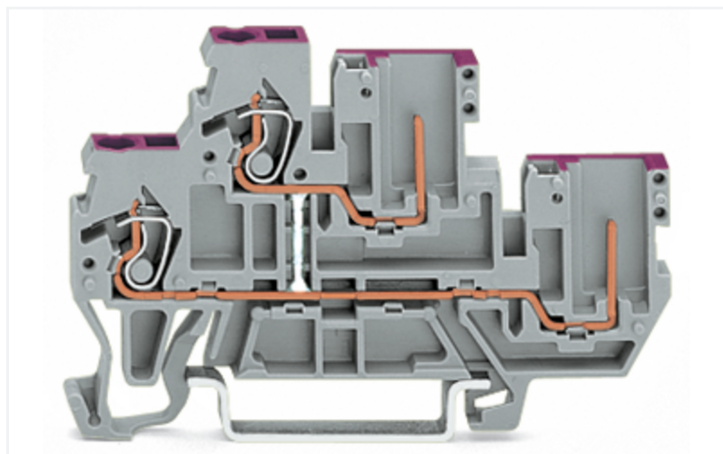


Data Sheet | Item Number: 870-109

2-conductor/2-pin, double-deck carrier terminal block; 2-conductor/2-pin through terminal block; 2.5 mm²; N; internal commoning; conductor entry with violet marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; blue

<https://www.wago.com/870-109>



Color: ■ blue

Similar to illustration

Double-deck terminal block, 870 Series, CAGE CLAMP®

Easy electrical installations are guaranteed with this double-deck terminal block (item number 870-109). Ensure that the strip lengths are between 6 and 7 mm when connecting conductors to this double-deck terminal block. Pluggable rail-mount terminal blocks are primarily found in switchgear units and control systems, most notably in railroad technology. These innovative systems combine the benefits of rail-mount terminal blocks and connectors for a flexible and reliable wiring system. You also have the option of pre-assembling installations, which not only makes production but also installation, operation, and maintenance more efficient and cost-effective. The double-deck terminal block also serves as a through terminal block. Featuring conductor terminals along with CAGE CLAMP®, this connector outperforms the competition. Our celebrated universal connection known as CAGE CLAMP® is industry-leading when it comes to connection technology and electrical interconnections. Depending on the type of conductor, this double-deck terminal block is ideal for conductor cross sections ranging from 0.08 mm² to 2.5 mm².

An operating tool is used to operate this pluggable rail-mount terminal block.

Notes

Safety Information

Max. insulation diameter: 4.4 mm

Safety information 2

2-conductor female plugs cannot be used.

Electrical data

Ratings per IEC/EN

| | |
|---|---|
| Nominal voltage (III/3) | 500 V |
| Rated impulse withstand voltage (III / 3) | 6 kV |
| Rated current | 16 A |
| Legend (ratings) | (III / 3) ± Overvoltage category III / Pollution degree 3 |

Power Loss

| | |
|--|-----------|
| Power loss, per pole (potential) | 0.3405 W |
| Rated current I_N for power loss specification | 16 A |
| Resistance value for specified, current-dependent power loss | 0.00133 Ω |

General information

| | |
|------------------|--------------------|
| Wiring direction | Front-entry wiring |
|------------------|--------------------|

Connection Data

| | | | |
|----------------------------|---|---|--|
| Clamping units | 2 | Connection 1 | |
| Total number of potentials | 1 | Connection technology | CAGE CLAMP® |
| Number of levels | 2 | Actuation type | Operating tool |
| | | Connectable conductor materials | Copper |
| | | Solid conductor | 0.08 ... 2.5 mm ² / 28 ... 12 AWG |
| | | Fine-stranded conductor | 0.08 ... 4 mm ² / 28 ... 12 AWG |
| | | Fine-stranded conductor; with insulated ferrule | 0.08 ... 1.5 mm ² / 28 ... 14 AWG |
| | | Strip length | 6 ... 7 mm / 0.24 ... 0.28 inches |
| | | Wiring direction | Front-entry wiring |

Physical data

| | |
|-----------------------------------|----------------------|
| Width | 5 mm / 0.197 inches |
| Height | 70 mm / 2.756 inches |
| Depth from upper-edge of DIN-rail | 40 mm / 1.575 inches |

Mechanical data

| | |
|-------------------|-----------------|
| Potential marking | N |
| Design | horizontal type |
| Mounting type | DIN-35 rail |
| Marking level | Side marking |

Material data

| | |
|------------------------------------|--|
| Note (material data) | Information on material specifications can be found here |
| Color | blue |
| Material group | I |
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Fire load | 0.146 MJ |
| Weight | 9.5 g |

Environmental requirements

| | |
|----------------------------------|-----------------|
| Processing temperature | -35 ... +85 °C |
| Continuous operating temperature | -60 ... +105 °C |

Commercial data

| | |
|-----------------------|---------------|
| PU (SPU) | 50 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4045454117962 |
| Customs tariff number | 85366990990 |

Product Classification

| | |
|-------------|----------------------|
| UNSPSC | 39121410 |
| eCl@ss 10.0 | 27-14-11-20 |
| eCl@ss 9.0 | 27-14-11-20 |
| ETIM 9.0 | EC000897 |
| ETIM 10.0 | EC000897 |
| ECCN | NO US CLASSIFICATION |

Environmental Product Compliance

| | |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

Approvals / Certificates

General approvals **Declarations of conformity and manufacturer's declarations**



| Approval | Standard | Certificate Name |
|--|----------|------------------|
| CCA DEKRA Certification B.V. | EN 60947 | NTR NL 7468 |
| CCA DEKRA Certification B.V. | EN 60947 | 2189801.01 |
| cURus UL International Germany GmbH | UL 1059 | E45172 |



| Approval | Standard | Certificate Name |
|--|----------|------------------|
| EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |
| Railway WAGO GmbH & Co. KG | - | Z00004430.000 |
| UK-Declaration of Conformity WAGO GmbH & Co. KG | - | - |

Approvals for marine applications



| Approval | Standard | Certificate Name |
|--|----------|-------------------|
| ABS American Bureau of Shipping | - | 24-0152298-PDA |
| DNV GL Det Norske Veritas, Germanischer Lloyd | - | TAE00001V2 |
| PRS Polski Rejestr Statków | - | TE/1094/880590/23 |

Downloads

Environmental Product Compliance

| |
|--|
| Compliance Search |
| Environmental Product Compliance 870-109 |

Documentation

| Bid Text | | | |
|----------|------------|-----------------|-------------------|
| 870-109 | 19.02.2019 | xml 3.38 KB | ↓ |
| 870-109 | 04.10.2017 | doc 25.00 KB | ↓ |

CAD/CAE-Data

| CAD data | CAE data |
|--|---|
| 2D/3D Models 870-109 ↓ | EPLAN Data Portal 870-109 ↓ |
| | WSCAD Universe 870-109 ↓ |
| | ZUKEN Portal 870-109 ↓ |

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 769-101/022-000

1-conductor female connector, angled; CAGE CLAMP®; 4 mm²; Pin spacing 5 mm; 1-pole; coding finger; 4,00 mm²; gray

Item No.: 769-101/000-006

1-conductor female connector; CAGE CLAMP®; 4 mm²; Pin spacing 5 mm; 1-pole; coding finger; 4,00 mm²; blue

Item No.: 769-101

1-conductor female connector; CAGE CLAMP®; 4 mm²; Pin spacing 5 mm; 1-pole; coding finger; 4,00 mm²; gray

1.2 Required Accessories

1.2.1 End plate

1.2.1.1 End plate



Item No.: 870-118

End and intermediate plate; 1 mm thick; gray

Item No.: 870-119

End and intermediate plate; 1 mm thick; orange

1.3 Optional Accessories

1.3.1 Coding

1.3.1.1 Coding



Item No.: 769-435

Coding pin; for coding of female plugs; for carrier terminal blocks / male connectors; orange

1.3.2 Cover

1.3.2.1 Cover



Item No.: 769-438

Pin cover; with marker slot for miniature WSB; gray



Item No.: 769-439

Pin cover; with marker slot for miniature WSB; orange

1.3.3 DIN-rail

1.3.3.1 Mounting accessories



Item No.: 210-196

Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-198

Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



Item No.: 210-508

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-197

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



Item No.: 210-506

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-114

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-118

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-115

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored



Item No.: 210-112

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored



Item No.: 210-504

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored



Item No.: 210-113

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-505

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored

1.3.4 Ferrule

1.3.4.1 Ferrule



Item No.: 216-321

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-131

Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



Item No.: 216-322

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-132

Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated



Item No.: 216-221

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



Item No.: 216-121

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



Item No.: 216-222

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-122

Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored

1.3.4.1 Ferrule



Item No.: 216-223
 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red

Item No.: 216-123
 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored

Item No.: 216-224
 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

Item No.: 216-124
 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

1.3.5 Installation

1.3.5.1 Mounting accessories



Item No.: 209-106
 Mounting carrier; for isolated mounting on DIN 35 rails; gray

Item No.: 249-116
 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.3.6 Insulation stop

1.3.6.1 Insulation stop



Item No.: 280-470
 Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white

Item No.: 280-471
 Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray

Item No.: 280-472
 Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; black

1.3.7 Jumper

1.3.7.1 Jumper



Item No.: 870-407/011-000

Item No.: 870-409/011-000

Item No.: 870-406/020-000
 Delta jumper; insulated; light gray

Item No.: 870-410
 Jumper; 10-way; insulated; light gray



Item No.: 870-402
 Jumper; 2-way; insulated; light gray

Item No.: 870-403
 Jumper; 3-way; insulated; light gray

Item No.: 870-404
 Jumper; 4-way; insulated; light gray

Item No.: 870-405
 Jumper; 5-way; insulated; light gray



Item No.: 870-406
 Jumper; 6-way; insulated; light gray

Item No.: 870-407
 Jumper; 7-way; insulated; light gray

Item No.: 870-408
 Jumper; 8-way; insulated; light gray

Item No.: 870-409
 Jumper; 9-way; insulated; light gray



Item No.: 870-440
 Jumper; from 1 to 10; insulated; light gray

Item No.: 870-433
 Jumper; from 1 to 3; insulated; light gray

Item No.: 870-434
 Jumper; from 1 to 4; insulated; light gray

Item No.: 870-435
 Jumper; from 1 to 5; insulated; light gray



Item No.: 870-405/011-000
 Jumper; insulated; light gray

1.3.8 Marking

1.3.8.1 Group marker carrier



[Item No.: 870-182](#)

Adaptor; gray

[Item No.: 870-183](#)

Adaptor; gray

[Item No.: 870-184](#)

Adaptor; gray

1.3.8.2 Marker



[Item No.: 2009-145](#)

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

[Item No.: 248-501](#)

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

[Item No.: 793-5501](#)

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

[Item No.: 793-501](#)

WMB marking card; as card; not stretchable; plain; snap-on type; white



[Item No.: 2009-115](#)

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.3.8.3 Marker carrier



[Item No.: 2009-198](#)

Adaptor; gray

1.3.9 Protective warning marker

1.3.9.1 Cover



[Item No.: 280-405](#)

Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.3.10 Test and measurement

1.3.10.1 Testing accessories



[Item No.: 870-427](#)

Spacer module; modular; bridging commoned terminal blocks; gray

[Item No.: 870-426](#)

Tap-off module; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray

[Item No.: 870-425](#)

Tap-off module; with anti-rotation protection; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray

1.3.11 Tool

1.3.11.1 Operating tool



Item No.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured