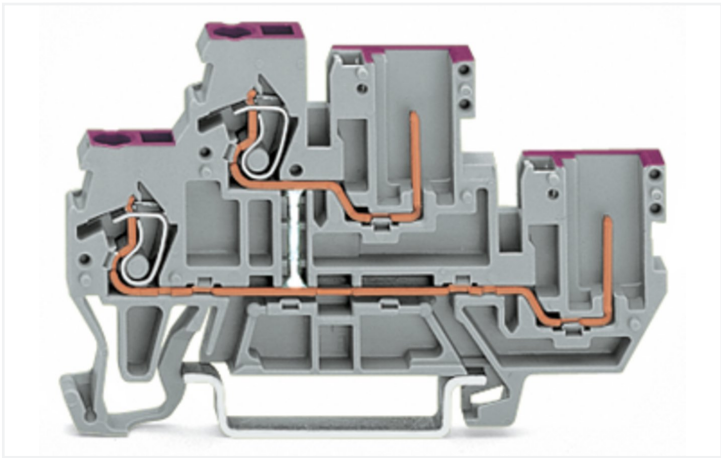# Data Sheet | Item Number: 870-109

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, operating tool

This double-deck terminal block (item number 870-109) simplifies electrical installations. Pluggable rail-mount terminal blocks are primarily found in switchgear units and control systems, most notably in railroad technology. These innovative systems combine the properties 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 functions as a through terminal block. This pluggable rail-mount terminal block has a rated voltage of 500 V and can handle currents up to 16 A. Conductors should only be connected to this double-deck terminal block if their strip length is between 6 mm and 7 mm. This product incorporates conductor terminals and utilizes CAGE CLAMP®. Our proven universal connection known as CAGE CLAMP® is industry-leading when it comes to connection technology and electrical interconnections. Depending on the conductor type, this double-deck terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It features two levels and two clamping points that you can use to connect a single potential. The blue housing is made of polyamide (PA66) for insulation. This pluggable rail-mount terminal block is operated with an operating tool. These pluggable rail-mount terminal blocks are mounted using DIN-35 rails.. The front-entry wiring allows you to connect copper conductors.

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 specified power loss	16 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

Connection data

			Connection 1	
Clamping units	2		Connection technology	CAGE CLAMP®
Total number of potentials	1		Actuation type	Operating tool
Number of levels	2		Connectable conductor materials	Copper
			Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
			Fine-stranded conductor	0.08 … 4 mm² / 28 … 12 AWG
			Fine-stranded conductor; with insulated ferrule	0.08 … 1.5 mm² / 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	0.194 MJ
Weight	9.5 g

Environmental requirements

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

Commercial data

eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 8.0	EC000897
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454117962
Customs tariff number	85366990990

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals

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

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	20-HG1941090-PDA
LR Lloyds Register	EN 60947	91/20112 (E9)

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 870-109	↓

Documentation

Additional Information

Technical Section	pdf 2246.92 KB	↓

Bid Text

870-109	19.02.2019	xml 3.38 KB	↓
870-109	04.10.2017	doc 25.00 KB	↓

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CAD/CAE-Data

CAD data

2D/3D Models 870-109 ↓

CAE data

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

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

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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.: 870-405/011-000

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

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

Subject to changes. Please also observe the further product documentation!

Current addresses can be found at:: www.wago.com