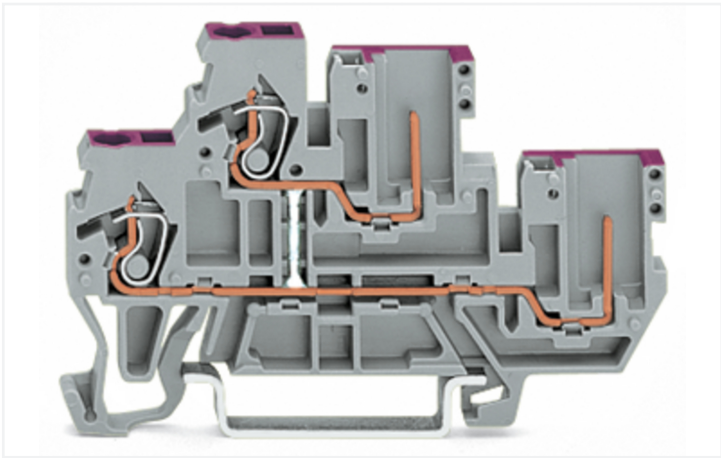


Data Sheet | Item Number: 870-109

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		Power Loss	
Nominal voltage (III/3)	500 V	Power loss, per pole (potential)	0.3405 W
Rated impulse withstand voltage (III / 3)	6 kV	Rated current I <sub>N</sub> for specified power loss	16 A
Rated current	16 A	Resistance value for specified, current-dependent power loss	0.00133 Ω
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3		



Connection data																		
Clamping units	2	<div>Connection 1</div> <table><tr><td>Connection technology</td><td>CAGE CLAMP®</td></tr><tr><td>Actuation type</td><td>Operating tool</td></tr><tr><td>Connectable conductor materials</td><td>Copper</td></tr><tr><td>Solid conductor</td><td>0.08 ... 2.5 mm² / 28 ... 12 AWG</td></tr><tr><td>Fine-stranded conductor</td><td>0.08 ... 4 mm² / 28 ... 12 AWG</td></tr><tr><td>Fine-stranded conductor; with insulated ferrule</td><td>0.08 ... 1.5 mm² / 28 ... 14 AWG</td></tr><tr><td>Strip length</td><td>6 ... 7 mm / 0.24 ... 0.28 inches</td></tr><tr><td>Wiring direction</td><td>Front-entry wiring</td></tr></table>	Connection technology	CAGE CLAMP®	Actuation type	Operating tool	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
Connection technology	CAGE CLAMP®																	
Actuation type	Operating tool																	
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																	
Total number of potentials	1																	
Number of levels	2																	

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)		<a href="#">Information on material specifications can be found here</a>
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		
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 8.0	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	Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL 7468	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
CCA DEKRA Certification B.V.	EN 60947	2189801.01	Railway WAGO GmbH & Co. KG	-	Z00004430.000
cURus UL International Germany GmbH	UL 1059	E45172	UK-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-

Approvals for marine applications		
Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	20-HG1941090-PDA

Downloads	
Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 870-109	



Documentation

Bid Text			
870-109	19.02.2019	xml 3.38 KB	<a href="#">↓</a>
870-109	04.10.2017	doc 25.00 KB	<a href="#">↓</a>

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 870-109 <a href="#">↓</a>	EPLAN Data Portal 870-109 <a href="#">↓</a>
	WSCAD Universe 870-109 <a href="#">↓</a>
	ZUKEN Portal 870-109 <a href="#">↓</a>

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



<a href="#">Item No.: 769-101/022-000</a> 1-conductor female connector, angled; CAGE CLAMP®; 4 mm²; Pin spacing 5 mm; 1-pole; coding finger; 4,00 mm²; gray	<a href="#">Item No.: 769-101/000-006</a> 1-conductor female connector; CAGE CLAMP®; 4 mm²; Pin spacing 5 mm; 1-pole; coding finger; 4,00 mm²; blue	<a href="#">Item No.: 769-101</a> 1-conductor female connector; CAGE CLAMP®; 4 mm²; Pin spacing 5 mm; 1-pole; coding finger; 4,00 mm²; gray
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1.2 Required Accessories
























1.2.1 End plate

1.2.1.1 End plate



<a href="#">Item No.: 870-118</a> End and intermediate plate; 1 mm thick; gray	<a href="#">Item No.: 870-119</a> End and intermediate plate; 1 mm thick; orange
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1.3 Optional Accessories			
1.3.1 Coding			
1.3.1.1 Coding			
			
<div>Item No.: 769-435</div> <div>Coding pin; for coding of female plugs; for carrier terminal blocks / male connectors; orange</div>			
1.3.2 Cover			
1.3.2.1 Cover			
			
<div>Item No.: 769-438</div> <div>Pin cover; with marker slot for miniature WSB; gray</div>		<div>Item No.: 769-439</div> <div>Pin cover; with marker slot for miniature WSB; orange</div>	
1.3.3 DIN-rail			
1.3.3.1 Mounting accessories			
			
<div>Item No.: 210-196</div> <div>Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored</div>	<div>Item No.: 210-198</div> <div>Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored</div>	<div>Item No.: 210-508</div> <div>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored</div>	<div>Item No.: 210-197</div> <div>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored</div>
			
<div>Item No.: 210-506</div> <div>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored</div>	<div>Item No.: 210-114</div> <div>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored</div>	<div>Item No.: 210-118</div> <div>Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored</div>	<div>Item No.: 210-115</div> <div>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</div>
			
<div>Item No.: 210-112</div> <div>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</div>	<div>Item No.: 210-504</div> <div>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored</div>	<div>Item No.: 210-113</div> <div>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored</div>	<div>Item No.: 210-505</div> <div>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored</div>
1.3.4 Ferrule			
1.3.4.1 Ferrule			
			
<div>Item No.: 216-321</div> <div>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow</div>	<div>Item No.: 216-131</div> <div>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored</div>	<div>Item No.: 216-322</div> <div>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise</div>	<div>Item No.: 216-132</div> <div>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated</div>
			
<div>Item No.: 216-221</div> <div>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white</div>	<div>Item No.: 216-121</div> <div>Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored</div>	<div>Item No.: 216-222</div> <div>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray</div>	<div>Item No.: 216-122</div> <div>Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored</div>



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.: 870-405/011-000](#)



[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