



Color: ■ green-yellow Similar to illustration

Female connector, 2022 Series, Push-in CAGE CLAMP®

Our female connector (item number 2022-102/000-016) 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 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. Strip lengths must be between 10 mm and 12 mm when connecting conductors to this female connector. Featuring conductor terminals along with Push-in CAGE CLAMP®, this product is highly versatile. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, boasting a key feature: It allows direct insertion of both solid and fine-stranded conductors with ferrules without needing tools. No preparation is required; for example, crimping the conductor's ferrule is not necessary. Dimensions: 10.4 x 40.5 x 22.4 mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.25 mm² to 4 mm². Up to two potentials / two poles can be connected to this terminal strip using two clamping points. The green-yellow housing is made of polyamide (PA66) for insulation. An operating tool is used to operate this female connector/socket. The front-entry wiring means you can connect copper conductors.

Notes		
Safety Information	According to EN 61984, pluggable connectors without current interrupting capacity must not be mated or unmated when live or under load.	

Electrical data

Ratings per	IEC/EN 61984		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	-	-	-
Rated surge voltage	-	-	-
Rated current	-	-	-

Connection data

Clamping units	2	Connection 1	
Total number of potentials	2	Connection technology	Push-in CAGE CLAMP®
		Actuation type	Operating tool
		Connectable conductor materials	Copper
		Nominal cross-section	2.5 mm²
		Solid conductor	0.25 ... 4 mm² / 22 ... 12 AWG
		Solid conductor; push-in termination	0.75 ... 4 mm² / 18 ... 12 AWG
		Fine-stranded conductor	0.25 ... 4 mm² / 22 ... 12 AWG



Connection 1	
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm² / 22 ... 14 AWG
Fine-stranded conductor; with ferrule; push-in termination	1 ... 2.5 mm² / 18 ... 14 AWG
Note (conductor cross-section)	Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.
Strip length	10 ... 12 mm / 0.39 ... 0.47 inches
Pole number	2
Wiring direction	Front-entry wiring

Physical data	
Width	10.4 mm / 0.409 inches
Height	40.5 mm / 1.594 inches
Depth	22.4 mm / 0.882 inches
Module width	5.2 mm / 0.205 inches

Mechanical data	
Variable coding	Yes
Marking level	Side marking
Anti-rotation protection	Yes

Plug-in connection	
Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for conductor
Mismating protection	No
Plugging without loss of pin spacing	Yes

Material data	
Note (material data)	Information on material specifications can be found here
Color	green-yellow
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.116 MJ
Weight	6.6 g

Environmental requirements	
Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C
Environmental Testing (Environmental Conditions)	
Test specification Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Installation location	Service life test, Category 1, Class A/B
Function test with noise-like vibration	Test passed according to Section 8 of the standard
Frequency	f ₁ = 5 Hz to f ₂ = 150 Hz f ₁ = 5 Hz to f ₂ = 150 Hz



Environmental Testing (Environmental Conditions)	
Acceleration	0.101g (highest test level used for all axes) 0.572g (highest test level used for all axes) 5g (highest test level used for all axes)
Test duration per axis	10 min. 5 h
Test directions	X, Y and Z axes X, Y and Z axes X, Y and Z axes
Monitoring for contact faults/interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like vibration	Test passed according to Section 9 of the standard
Extended test scope: Monitoring for contact faults/interruptions	Passed Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed Passed
Shock test	Test passed according to Section 10 of the standard
Shock form	Half sine
Shock duration	30 ms
Number of shocks per axis	3 pos. und 3 neg.
Vibration and shock stress for rolling stock equipment	Passed

Commercial data	
Product Group	18 (X-COM-System)
PU (SPU)	200 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454705589
Customs tariff number	85366990990

Product classification	
UNSPSC	39121409

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CSA DEKRA Certification B.V.	C22.2 No. 158	2437422

Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Z00004391.000



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
2022-102/000-016

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Documentation

Additional Information

Technical Sectionpdf
2246.92 KB

↓

Bid Text

2022-102/000-01615.05.2019xml
4.12 KB

↓

2022-102/000-01614.05.2019docx
15.24 KB

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CAD/CAE-Data

CAD data

2D/3D Models
2022-102/000-016

↓

CAE data

EPLAN Data Portal
2022-102/000-016

↓

WSCAD Universe
2022-102/000-016

↓

ZUKEN Portal
2022-102/000-016


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1 Compatible Products

1.1 Optional Accessories


1.1.1 Ferrule

1.1.1.1 Ferrule




Item No.: 216-241

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white




Item No.: 216-242

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray




Item No.: 216-262

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray




Item No.: 216-243

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red




Item No.: 216-263

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red




Item No.: 216-244

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black




Item No.: 216-264

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black




Item No.: 216-284

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black




Item No.: 216-246

Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



Item No.: 216-266

Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



Item No.: 216-286

Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



1.1.2 Insulation stop

1.1.2.1 Insulation stop



Item No.: 2002-171
Insulation stop; 0.25 - 0.5 mm²; 5 pieces/
strip; light gray



Item No.: 2002-172
Insulation stop; 0.75 - 1 mm²; 5 pieces/
strip; dark gray

1.1.3 Locking system

1.1.3.1 Locking system



Item No.: 2022-141
Locking lever; gray



Item No.: 2022-142
Locking lever; orange

1.1.4 Marking

1.1.4.1 Label



Item No.: 210-805
Labels; for Smart Printer; permanent ad-
hesive; 6 x 15 mm; white



Item No.: 210-805/000-002
Labels; for Smart Printer; permanent ad-
hesive; 6 x 15 mm; yellow

1.1.4.2 Marker



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.: 2009-115
WMB-Inline; for Smart Printer; 1500 pie-
ces on roll; stretchable 5 - 5.2 mm; plain;
snap-on type; white

1.1.4.3 Marking strip



Item No.: 210-833
Marking strips; 25 m on roll; 6 mm wide;
plain; Self-adhesive; white



Item No.: 2009-110
Marking strips; for Smart Printer; on reel;
not stretchable; plain; snap-on type; whi-
te



Item No.: 210-831
Marking strips; on reel; 2.3 mm wide;
plain; Self-adhesive; white



Item No.: 210-832
Marking strips; on reel; 3 mm wide; plain;
Self-adhesive; white



Item No.: 210-834
Marking strips; on reel; 5 mm wide; plain;
Self-adhesive; white

1.1.5 Protective warning marker

1.1.5.1 Cover



Item No.: 2002-115
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.1.6 Screwless end stop

1.1.6.1 Mounting accessories



Item No.: 249-117
Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray



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

1.1.7 Strain relief

1.1.7.1 Strain relief plate



Item No.: 734-327
Strain relief plate; for female and male connectors; 6 mm wide; 1 part; gray

1.1.8 Tool

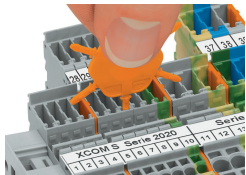
1.1.8.1 Operating tool



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

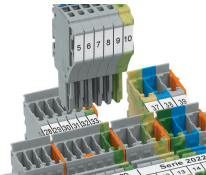
Coding



Insert coding pin into the corresponding slot and twist it off.

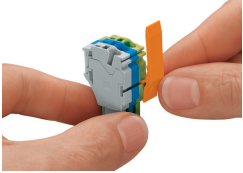


Coding a female plug: remove coding finger using a suitable tool.

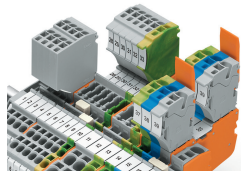


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

Locking system



Slide the locking lever into position.



Female plugs can be individually locked.