

Color: gray/blue/green-yellow

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

This female connector (item number 2022-105/000-038) simplifies electrical installations. Pluggable rail-mount terminal blocks are mainly used in switchgear units and control systems (e.g., in railroad technology). They are essentially a combination of rail-mount terminal blocks and pluggable connectors. You can also pre-assemble installations thanks to the variable wiring system. This saves both time and money during manufacture, installation, operation, and maintenance. Our pluggable rail-mount terminal block is rated for 690 V and is designed to handle a rated current of up to 24 A. Ensure that the strip lengths are between 10 mm and 12 mm when connecting conductors to this female connector. This product features conductor terminals and utilizes Push-in CAGE CLAMP®. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, boasting a key feature: both solid and fine-stranded conductors with ferrules can be directly inserted without the need for tools or any preparation, such as crimping the ferrule. The dimensions are 26 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. You can connect five potentials / five poles using the five clamping points. The gray/blue/green-yellow housing is made of polyamide (PA66) for insulation. This female connector/socket is operated with an operating tool. The front-entry wiring allows you to 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			Approvals per	
					UL 1059	
Overvoltage category		III	III	II	Use group	B C D
Pollution degree		3	2	2	Rated voltage	600 V 600 V -
Nominal voltage		690 V	-	-	Rated current	20 A 20 A -
Rated surge voltage		6 kV	-	-		
Rated current		24 A	-	-		
Current at conductor cross-section (max.) mm²		32 A	-	-		
Approvals per		CSA 22.2 No 158				
Use group		B	C	D		
Rated voltage		-	600 V	-		
Rated current		-	20 A	-		



Connection data																												
Clamping units	5	<div><div>Connection 1</div><table><tr><td>Connection technology</td><td>Push-in 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>Nominal cross-section</td><td>2.5 mm²</td></tr><tr><td>Solid conductor</td><td>0.25 ... 4 mm² / 22 ... 12 AWG</td></tr><tr><td>Solid conductor; push-in termination</td><td>0.75 ... 4 mm² / 18 ... 12 AWG</td></tr><tr><td>Fine-stranded conductor</td><td>0.25 ... 4 mm² / 22 ... 12 AWG</td></tr><tr><td>Fine-stranded conductor; with insulated ferrule</td><td>0.25 ... 2.5 mm² / 22 ... 14 AWG</td></tr><tr><td>Fine-stranded conductor; with ferrule; push-in termination</td><td>1 ... 2.5 mm² / 18 ... 14 AWG</td></tr><tr><td>Note (conductor cross-section)</td><td>Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.</td></tr><tr><td>Strip length</td><td>10 ... 12 mm / 0.39 ... 0.47 inches</td></tr><tr><td>Pole number</td><td>5</td></tr><tr><td>Wiring direction</td><td>Front-entry wiring</td></tr></table></div>	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	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	5	Wiring direction	Front-entry wiring
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																											
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	5																											
Wiring direction	Front-entry wiring																											
Total number of potentials	5																											

Physical data		
Width	26 mm / 1.024 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	gray/blue/green-yellow	
Material group	I	
Insulation material (main housing)	Polyamide (PA66)	
Flammability class per UL94	V0	
Fire load	0.277 MJ	
Weight	16.3 g	



Environmental requirements

Processing temperature	-35 ... +85 °C	Environmental Testing (Environmental Conditions)	
Continuous operating temperature	-60 ... +105 °C	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
		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)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454915582
Customs tariff number	85366990990





Product classification	
UNSPSC	39121409
eCl@ss 10.0	27-14-11-06
eCl@ss 9.0	27-14-11-06
ETIM 9.0	EC001284
ETIM 8.0	EC001284
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
CSA DEKRA Certification B.V.	C22.2 No. 158	2437422	Railway WAGO GmbH & Co. KG	-	Z00004391.000
UL Underwriters Laboratories Inc.	UL 1059	E45172			

Downloads	
Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 2022-105/000-038	

Documentation			
Bid Text			
2022-105/000-038	16.05.2019	xml 4.22 KB	
2022-105/000-038	14.05.2019	docx 15.33 KB	














CAD/CAE-Data	
<div>CAD data</div> <div>2D/3D Models 2022-105/000-038</div> <div>↓</div>	<div>CAE data</div> <div>EPLAN Data Portal 2022-105/000-038</div> <div>↓</div> <div>WSCAD Universe 2022-105/000-038</div> <div>↓</div> <div>ZUKEN Portal 2022-105/000-038</div> <div>↓</div>

1 Compatible Products

1.1 Optional Accessories



1.1.1 Ferrule

1.1.1.1 Ferrule

 <div>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</div>	 <div>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</div>	 <div>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</div>	 <div>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</div>
 <div>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</div>	 <div>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</div>	 <div>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</div>	 <div>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</div>
 <div>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</div>	 <div>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</div>	 <div>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</div>	

1.1.2 Insulation stop

1.1.2.1 Insulation stop

 <div>Item No.: 2002-171 Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray</div>	 <div>Item No.: 2002-172 Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; dark gray</div>
---	--



1.1.3 Locking system

1.1.3.1 Locking system



[Item No.: 2022-151](#)
Locking lever; gray



[Item No.: 2022-152](#)
Locking lever; orange

1.1.4 Marking

1.1.4.1 Label



[Item No.: 210-805](#)
Labels; for Smart Printer; permanent adhesive; 6 x 15 mm; white



[Item No.: 210-805/000-002](#)
Labels; for Smart Printer; permanent adhesive; 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 pieces 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; white



[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.: 734-329
Strain relief plate; for female and male connectors; 25 mm wide; 1 part; gray

1.1.8 Tool

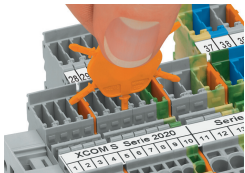
1.1.8.1 Operating tool



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

Installation Notes

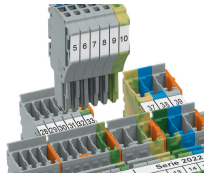
Coding



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.