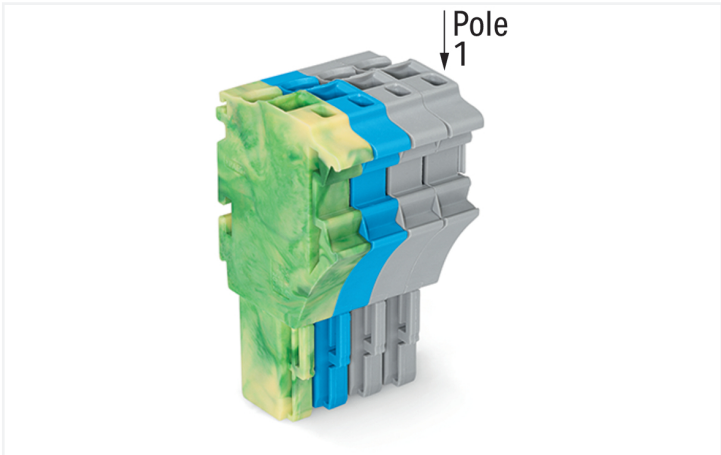




Color:  green-yellow/blue/gray

Female connector, 2022 Series, operating tool

Seamless electrical installations are guaranteed with this female connector (item number 2022-104/000-039). Pluggable rail-mount terminal blocks are hugely popular in switchgear and control systems, for example, in railroad technology. They combine the best of rail-mount terminal blocks and connectors to create the perfect solution. Variable wiring systems make pre-assembly easy, which leads to considerable time and cost savings in production, installation, operation, and maintenance. Our pluggable rail-mount terminal block is rated for 690 V and is designed for use with 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®. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. It allows direct insertion of both solid and fine-stranded conductors with ferrules without the need for tools—all thanks to its pluggable design. Dimensions: 20.8 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. There are four clamping points available for connecting four different potentials / four poles. The green-yellow/blue housing is made of polyamide (PA66) for insulation. This female connector/socket is operated with an operating tool. Conductors made of copper can be connected via front-entry wiring.

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	690 V	-	-	
Rated impulse withstand 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	-	

Approvals per		UL 1059		
Use group	B	C	D	
Rated voltage	600 V	600 V	-	
Rated current	20 A	20 A	-	



Connection data			
Clamping units	4	Connection 1	
Total number of potentials	4	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	4
		Wiring direction	Front-entry wiring

Physical data		
Width		20.8 mm / 0.819 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/blue/gray
Material group		I
Insulation material (main housing)		Polyamide (PA66)
Flammability class per UL94		V0
Fire load		0.255 MJ
Weight		14 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
Acceleration	0.101g (highest test level used for all axes)
Test duration per axis	10 min.
Test directions	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
Frequency	f ₁ = 5 Hz to f ₂ = 150 Hz
Acceleration	0.572g (highest test level used for all axes)
Test duration per axis	5 h
Test directions	X, Y and Z axes
Extended test scope: Monitoring for contact faults/interruptions	Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed
Shock test	Test passed according to Section 10 of the standard
Shock form	Half sine
Acceleration	5g (highest test level used for all axes)
Shock duration	30 ms
Number of shocks per axis	3 pos. und 3 neg.
Test directions	X, Y and Z axes
Extended test scope: Monitoring for contact faults/interruptions	Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed
Vibration and shock stress for rolling stock equipment	Passed

Commercial data

Product Group	18 (X-COM-System)
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454915773
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 2022-104/000-039	

Documentation			
Bid Text			
2022-104/000-039	14.05.2019	docx 15.39 KB	
2022-104/000-039	15.05.2019	xml 4.22 KB	



CAD/CAE-Data	
CAD data 2D/3D Models 2022-104/000-039 ↓	CAE data EPLAN Data Portal 2022-104/000-039 ↓ WSCAD Universe 2022-104/000-039 ↓ ZUKEN Portal 2022-104/000-039 ↓

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
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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; 3000 pieces on roll; white



Item No.: 210-805/000-002
Labels; for Smart Printer; permanent adhesive; 6 x 15 mm; 3000 pieces on roll; 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.: 734-328
Strain relief plate; for female and male connectors; 12.5 mm wide; 1 part; gray

1.1.8 Tool

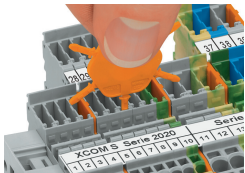
1.1.8.1 Operating tool



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

Installation Notes

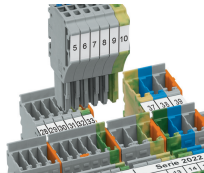
Coding



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.