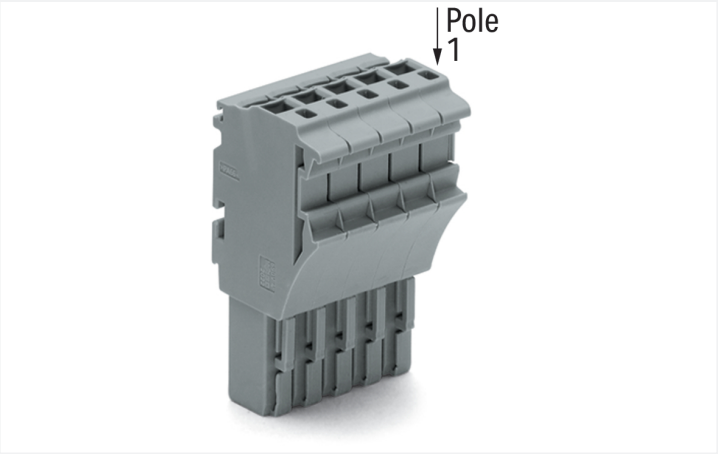
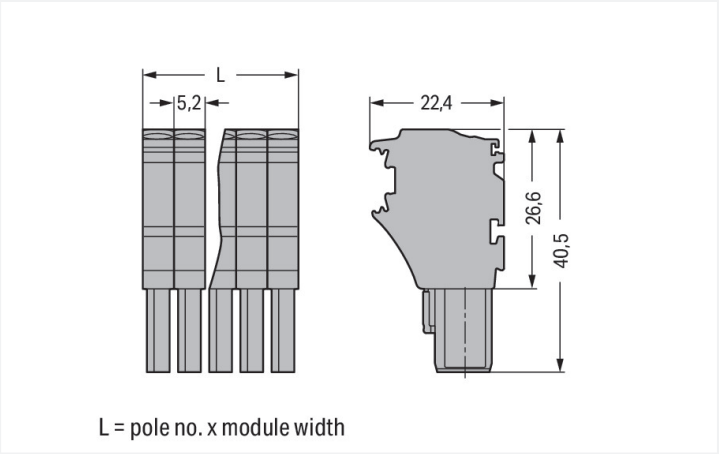
Data Sheet | Item Number: 2022-108

1-conductor female connector; Push-in CAGE CLAMP®; 4 mm²; Pin spacing 5.2 mm; 8-pole; 4,00 mm²; gray

https://www.wago.com/2022-108



Color: gray — Similar to illustration



Dimensions in mm

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

This female connector (item number 2022-108) 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. Rated current and voltage are key factors to consider when selecting a pluggable rail-mount terminal block, as they indicate how the product can be used. This product has a rated voltage of 690 V and a rated current of 24 A. 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 delivers reliable performance. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, offering a key advantage: 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 41.6 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. Eight potentials can connect eight poles using the eight clamping points The gray housing is made of polyamide (PA66) for insulation. An operating tool is used to operate this female connector/socket. 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 surge voltage	6 kV	-	-
Rated current	24 A	-	-
Current at conductor cross-section (max.) mm²	32 A	-	-

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

Approvals per	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	-	600 V	-
Rated current	-	20 A	-

Continued on next page

Connection data

Clamping units	8
Total number of potentials	8

Connection 1

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	8
Wiring direction	Front-entry wiring

Physical data

Width	41.6 mm / 1.638 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
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.506 MJ
Weight	25.7 g

Continued on next page

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
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

PU (SPU)	50 pcs
Packaging type	Box
Country of origin	CN
GTIN	4050821242796
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

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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
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-101560
UL Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
Railway WAGO GmbH & Co. KG	-	Z00004391.000
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	20-HG1941090-PDA
BV Bureau Veritas S.A.	EN 60947	38586/B0 BV
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2022-108

Documentation

Bid Text

2022-108	17.05.2019	xml 4.11 KB
2022-108	14.05.2019	docx 15.30 KB

Continued on next page

CAD/CAE-Data

CAD data

2D/3D Models
2022-108

CAE data

EPLAN Data Portal
2022-108

WSCAD Universe
2022-108

ZUKEN Portal
2022-108

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.: 2022-151
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

Continued on next page

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.: 734-326
Strain relief plate; for female and male connectors; 35 mm wide; 1 part; gray

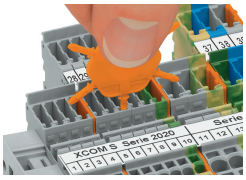
1.1.8 Tool

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

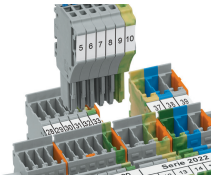
Installation Notes

Coding



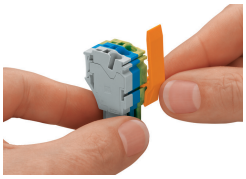
Insert coding pin into the corresponding slot and twist it off.

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

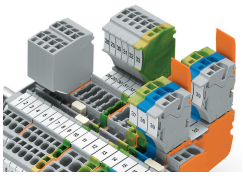


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

Locking system



Slide the locking lever into position.



Female plugs can be individually locked.