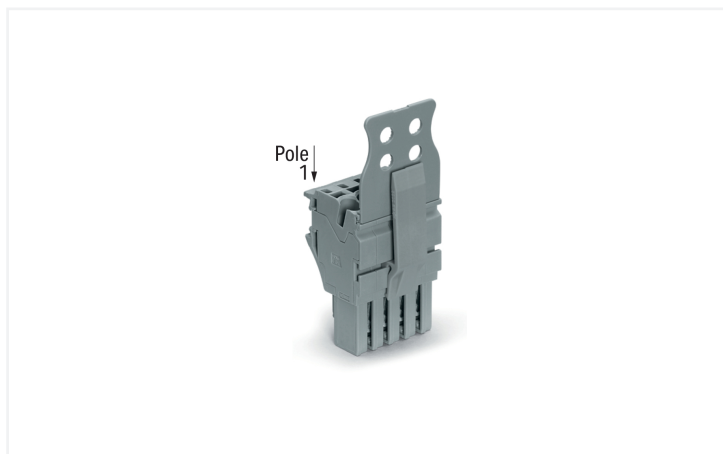


Data Sheet | Item Number: 2022-115/147-000

1-conductor female connector; Push-in CAGE CLAMP®; 4 mm²; Pin spacing 5.2 mm; 15-pole; Centered locking levers; Strain relief plate; 4,00 mm²; gray

<https://www.wago.com/2022-115/147-000>



Color: ■ gray

Similar to illustration

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

Our female connector (item number 2022-115/147-000) ensures effortless electrical installations. Ensure that the strip lengths are between 10 and 12 mm when connecting conductors to this female connector. Pluggable rail-mount terminal blocks are hugely popular in switchgear and control systems, for example, in rail-road 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. 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, featuring a winning design: 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. The item's dimensions are (78 x 79 x 27.2) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.25 mm² to 4 mm².

This female connector/socket is operated with an operating tool. You can secure connected conductors using the strain relief plate to make cables easier to handle..

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		
	III	III	II		B	C	D
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 impulse withstand voltage	6 kV	-	-				
Rated current	24 A	-	-				
Current at conductor cross-section (max.) mm ²	32 A	-	-				

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

General information	
Wiring direction	Front-entry wiring

Connection Data

Clamping units	15
Total number of potentials	15

Connection 1	
Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Nominal cross-section	2.5 mm ²
Solid conductor	0.25 ... 4 mm ² / 22 ... 12 AWG
Solid conductor; push-in termination	0.75 ... 4 mm ² / 18 ... 12 AWG
Fine-stranded conductor	0.25 ... 4 mm ² / 22 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor; with ferrule; push-in termination	1 ... 2.5 mm ² / 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	15
Wiring direction	Front-entry wiring

Physical data

Width	78 mm / 3.071 inches
Height	79 mm / 3.11 inches
Depth	27.2 mm / 1.071 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
Locking of plug-in connection	Locking lever
Strain relief	Strain relief plate

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	1.025 MJ
Weight	58.6 g

Environmental requirements

Processing temperature	-35 ... +85 °C	Environmental Testing
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 – Vibration and shock tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Mounting location		Service life test, Category 1, Class A/B
Functional test with noise-like oscillations		Test passed according to Section 8 of the standard
Frequency		$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
Acceleration		0.101g (highest test level used for all axes)
Test duration per axis		10 min.
Test directions		X, Y and Z axes
Monitoring of contact faults and interruptions		Passed
Voltage drop measurement before and after each axis		Passed
Simulated service life test through increased levels of noise-like oscillations		Test passed according to Section 9 of the standard
Frequency		$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
Acceleration		0.572g (highest test level used for all axes)
Test duration per axis		5 h
Test directions		X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions		Passed
Extended testing: Voltage drop measurement before and after each axis		Passed
Shock test		Test passed according to Section 10 of the standard
Shock pulse 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 testing: Monitoring of contact faults and interruptions		Passed
Extended testing: 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)	15 pcs
Packaging type	Box
Country of origin	DE
GTIN	4066966666274
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 10.0	EC001284
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CSA CSA Group	C22.2 No. 158	2437422	Railway WAGO GmbH & Co. KG	-	Z00004392.000

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 2022-115/147-000	↓

Documentation

Bid Text			
2022-115/147-000	17.05.2019	xml 4.22 KB	↓
2022-115/147-000	14.05.2019	docx 15.33 KB	↓

CAD/CAE-Data

CAD data
 2D/3D Models
 2022-115/147-000

CAE data
 EPLAN Data Portal
 2022-115/147-000

WSCAD Universe
 2022-115/147-000

ZUKEN Portal
 2022-115/147-000

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.: 216-246
 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

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 Marking

1.1.3.1 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

1.1.3.2 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

1.1.3.3 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

1.1.4 Protective warning marker

1.1.4.1 Cover



Item No.: 2002-115

Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.1.5 Tool

1.1.5.1 Operating tool

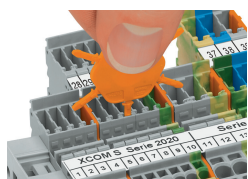


Item No.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

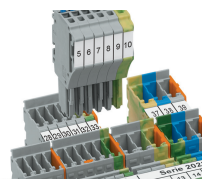
Coding



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.