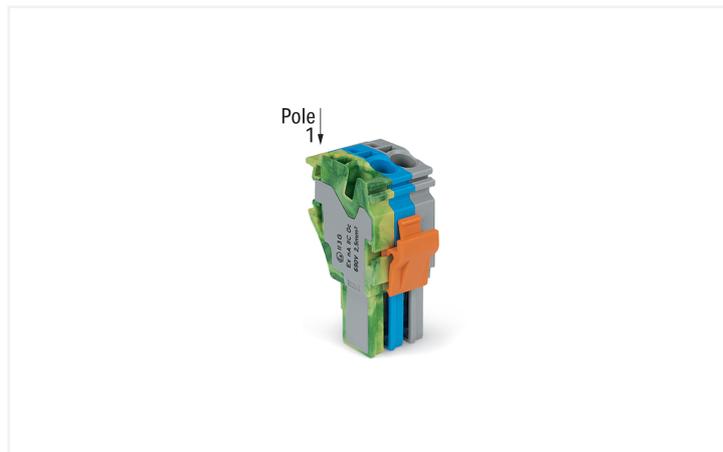
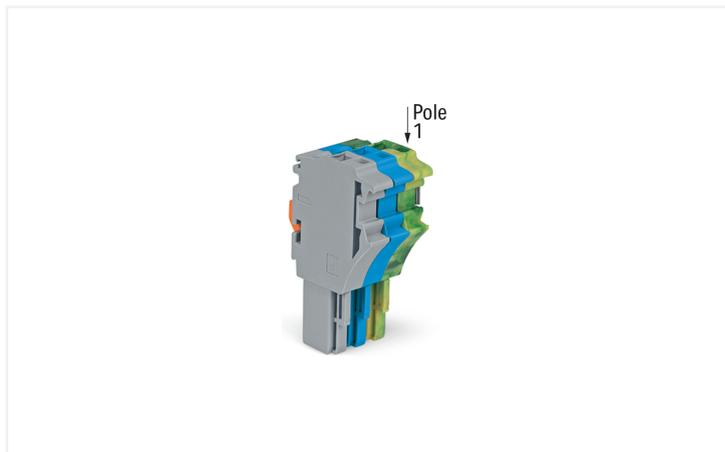


Data Sheet | Item Number: 2022-103/000-038/999-953

1-conductor female connector; Push-in CAGE CLAMP®; 4 mm²; Pin spacing 5.2 mm;
3-pole; Centered locking levers; 4,00 mm²; gray/blue/green-yellow

<https://www.wago.com/2022-103/000-038/999-953>



Color: gray/blue/green-yellow

Female connector, 2022 Series, gray/blue/green-yellow

This female connector (item number 2022-103/000-038/999-953) provides hassle-free electrical installations. Conductors can only be connected to this female connector if their strip length is between 10 and 12 mm. 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 for the perfect solution. Variable wiring systems make pre-assembly easy, which saves both time and money in production, installation, operation, and maintenance. 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 item's dimensions are (15.6 x 40.5 x 22.4) mm (width x height x depth). Depending on the type of conductor, this female connector is suitable for conductor cross sections ranging from 0.25 mm² to 4 mm².

An operating tool is used to operate this female connector/socket. This product is designed for specific Ex applications (please refer to the product datasheet).

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 impulse withstand voltage | - | - | - |
| Rated current | - | - | - |

| 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 | - |

| Ex information | |
|----------------------------|-------|
| Rated voltage EN (Ex e II) | 630 V |

| General information | |
|---------------------|--------------------|
| Wiring direction | Front-entry wiring |

Connection Data

| | |
|----------------------------|---|
| Clamping units | 3 |
| Total number of potentials | 3 |

| 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 | 3 |

Physical data

| | |
|--------------|------------------------|
| Width | 15.6 mm / 0.614 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 | 0.202 MJ |
| Weight | 10.9 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

| | |
|-----------------------|---------------|
| PU (SPU) | 100 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4066966671797 |
| 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 |
|------------------------|-------------------------|

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|------------------|---------------|------------------|
| CSA CSA Group | C22.2 No. 158 | 2437422 |

Declarations of conformity and manufacturer's declarations



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

Approvals for hazardous areas



| Approval | Standard | Certificate Name |
|---|----------------|--|
| ATEX Physikalisch Technische Bundesanstalt | EN IEC 60079-0 | PTB 13 ATEX 1004 U (II 3 G Ex ec II C Gc) |
| CCC CNEX | GB/T 3836.3 | 2020312313000255 (Ex ec IIC Gc) |
| IECEX Physikalisch Technische Bundesanstalt | IEC 60079-0 | IECEX PTB 13.0004U (Ex ec IIC Gc) |

Downloads

Environmental Product Compliance

Compliance Search

↓

Documentation

| Bid Text | | | |
|-------------------------|------------|------------------|---|
| 2022-103/000-038/99-953 | 14.05.2019 | docx 15.49 KB | ↓ |
| 2022-103/000-038/99-953 | 15.05.2019 | xml 4.30 KB | ↓ |

CAD/CAE-Data

CAE data

↓

↓

1 Compatible Products

1.1 Optional Accessories

1.1.1 Ferrule

1.1.1.1 Ferrule

| | | | |
|--|--|--|--|
| | | | |
| <p>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</p> | <p>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</p> | <p>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</p> | <p>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</p> |
| | | | |
| <p>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</p> | <p>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</p> | <p>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</p> | <p>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</p> |
| | | | |
| <p>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</p> | <p>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</p> | <p>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</p> | |

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 Screwless end stop

1.1.5.1 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

1.1.6 Strain relief

1.1.6.1 Strain relief plate

Item No.: 734-328

Strain relief plate; for female and male connectors; 12.5 mm wide; 1 part; gray

1.1.7 Tool

1.1.7.1 Operating tool

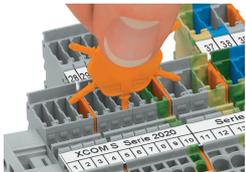


Item No.: 210-720

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

Installation Notes

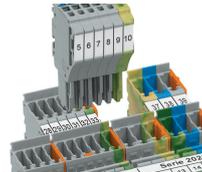
Coding



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.