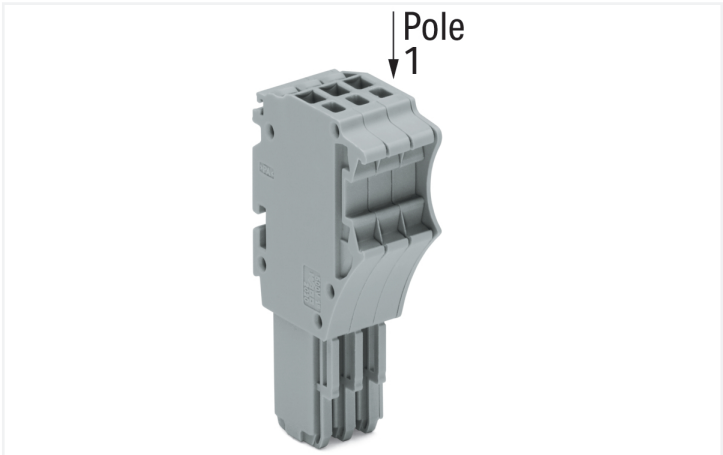
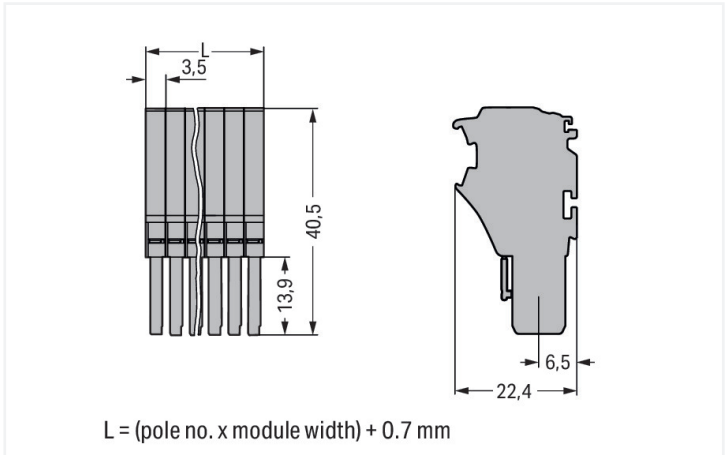




Color: ■ gray

Similar to illustration



Dimensions in mm

Female connector, 2020 Series, operating tool

Our female connector (item number 2020-109) is designed for seamless electrical installations. 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 leads to considerable time and cost savings in production, installation, operation, and maintenance. Rated current and voltage are important parameters when selecting a pluggable rail-mount terminal block, as they indicate possible applications and uses. This product has a rated voltage of 500 V and a rated current of 13.5 A. Strip lengths must be between 9 mm and 11 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, 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 dimensions are 32.2 x 40.5 x 22.4 mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.14 mm² to 1.5 mm². Up to nine potentials / nine poles can be connected to this terminal strip using nine clamping points. The gray housing is made of polyamide (PA66) for insulation. An operating tool is used to operate this female connector/socket. The front-entry wiring makes it possible 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. |
| Safety information 2 | Notice: An appropriate end plate must be applied to the carrier terminal blocks after each female plug.                                 |

| Electrical data                 |  |                 |       |       |
|---------------------------------|--|-----------------|-------|-------|
| Ratings per                     |  | IEC/EN 61984    |       |       |
| Overvoltage category            |  | III             | III   | II    |
| Pollution degree                |  | 3               | 2     | 2     |
| Nominal voltage                 |  | 500 V           | -     | -     |
| Rated impulse withstand voltage |  | 6 kV            | -     | -     |
| Rated current                   |  | 13.5 A          | -     | -     |
| Approvals per                   |  | UL 1059         |       |       |
| Use group                       |  | B               | C     | D     |
| Rated voltage                   |  | 300 V           | 300 V | 300 V |
| Rated current                   |  | 15 A            | 15 A  | 15 A  |
| Approvals per                   |  | CSA 22.2 No 158 |       |       |
| Use group                       |  | B               | C     | D     |
| Rated voltage                   |  | 300 V           | 300 V | 300 V |
| Rated current                   |  | 10 A            | 10 A  | 10 A  |



| Connection data                                            |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------|----------------|---------------------------------|--------|-----------------------|-------|-----------------|----------------------------------|--------------------------------------|---------------------------------|-------------------------|----------------------------------|-------------------------------------------------|-----------------------------------|------------------------------------------------------------|----------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------|-------------|---|------------------|--------------------|
| Clamping units                                             | 9                                                                                                                                 | <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>1 mm²</td></tr><tr><td>Solid conductor</td><td>0.14 ... 1.5 mm² / 24 ... 16 AWG</td></tr><tr><td>Solid conductor; push-in termination</td><td>0.5 ... 1.5 mm² / 20 ... 16 AWG</td></tr><tr><td>Fine-stranded conductor</td><td>0.14 ... 1.5 mm² / 24 ... 16 AWG</td></tr><tr><td>Fine-stranded conductor; with insulated ferrule</td><td>0.14 ... 0.75 mm² / 24 ... 18 AWG</td></tr><tr><td>Fine-stranded conductor; with ferrule; push-in termination</td><td>0.5 ... 0.75 mm² / 20 ... 18 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>9 ... 11 mm / 0.35 ... 0.43 inches</td></tr><tr><td>Pole number</td><td>9</td></tr><tr><td>Wiring direction</td><td>Front-entry wiring</td></tr></table> | Connection technology | Push-in CAGE CLAMP® | Actuation type | Operating tool | Connectable conductor materials | Copper | Nominal cross-section | 1 mm² | Solid conductor | 0.14 ... 1.5 mm² / 24 ... 16 AWG | Solid conductor; push-in termination | 0.5 ... 1.5 mm² / 20 ... 16 AWG | Fine-stranded conductor | 0.14 ... 1.5 mm² / 24 ... 16 AWG | Fine-stranded conductor; with insulated ferrule | 0.14 ... 0.75 mm² / 24 ... 18 AWG | Fine-stranded conductor; with ferrule; push-in termination | 0.5 ... 0.75 mm² / 20 ... 18 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 | 9 ... 11 mm / 0.35 ... 0.43 inches | Pole number | 9 | Wiring direction | Front-entry wiring |
| Connection technology                                      | Push-in CAGE CLAMP®                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Actuation type                                             | Operating tool                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Connectable conductor materials                            | Copper                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Nominal cross-section                                      | 1 mm²                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Solid conductor                                            | 0.14 ... 1.5 mm² / 24 ... 16 AWG                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Solid conductor; push-in termination                       | 0.5 ... 1.5 mm² / 20 ... 16 AWG                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Fine-stranded conductor                                    | 0.14 ... 1.5 mm² / 24 ... 16 AWG                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Fine-stranded conductor; with insulated ferrule            | 0.14 ... 0.75 mm² / 24 ... 18 AWG                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Fine-stranded conductor; with ferrule; push-in termination | 0.5 ... 0.75 mm² / 20 ... 18 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                                               | 9 ... 11 mm / 0.35 ... 0.43 inches                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Pole number                                                | 9                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Wiring direction                                           | Front-entry wiring                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |
| Total number of potentials                                 | 9                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                |                |                                 |        |                       |       |                 |                                  |                                      |                                 |                         |                                  |                                                 |                                   |                                                            |                                  |                                |                                                                                                                                   |              |                                    |             |   |                  |                    |

| Physical data |                        |  |
|---------------|------------------------|--|
| Width         | 32.2 mm / 1.268 inches |  |
| Height        | 40.5 mm / 1.594 inches |  |
| Depth         | 22.4 mm / 0.882 inches |  |
| Module width  | 3.5 mm / 0.138 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                      |  |

| Material data                      |                                                                          |  |
|------------------------------------|--------------------------------------------------------------------------|--|
| Note (material data)               | <a href="#">Information on material specifications can be found here</a> |  |
| Color                              | gray                                                                     |  |
| Material group                     | I                                                                        |  |
| Insulation material (main housing) | Polyamide (PA66)                                                         |  |
| Flammability class per UL94        | V0                                                                       |  |
| Fire load                          | 0.364 MJ                                                                 |  |
| Weight                             | 20.5 g                                                                   |  |



| Environmental requirements       |                 |
|----------------------------------|-----------------|
| Processing temperature           | -35 ... +85 °C  |
| Continuous operating temperature | -60 ... +105 °C |

| Commercial data       |                   |
|-----------------------|-------------------|
| Product Group         | 18 (X-COM-System) |
| PU (SPU)              | 25 pcs            |
| Packaging type        | Box               |
| Country of origin     | DE                |
| GTIN                  | 4045454853600     |
| 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                                           |
| CCA<br>DEKRA Certification B.V.                         | EN 60947 | NTR NL 7617                                                |
| CSA<br>DEKRA Certification B.V.                         | C22.2    | 2516073                                                    |
| UL<br>UL International Germany GmbH                     | UL 1059  | E 45172                                                    |
| Approval                                                | Standard | Certificate Name                                           |
| EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                                                          |
| UK-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                                                          |

| Approvals for marine applications       |          |                  |
|-----------------------------------------|----------|------------------|
|                                         |          |                  |
| Approval                                | Standard | Certificate Name |
| ABS<br>American Bureau of Ship-<br>ping | EN 60947 | 24-0152298-PDA   |



Downloads

Environmental Product Compliance

|                                           |  |  |  |
|-------------------------------------------|--|--|--|
| Compliance Search                         |  |  |  |
| Environmental Product Compliance 2020-109 |  |  |  |

Documentation

|          |            |                  |  |
|----------|------------|------------------|--|
| Bid Text |            |                  |  |
| 2020-109 | 19.02.2019 | xml<br>3.90 KB   |  |
| 2020-109 | 06.08.2018 | docx<br>15.00 KB |  |

CAD/CAE-Data

|                          |  |
|--------------------------|--|
| CAD data                 |  |
| 2D/3D Models<br>2020-109 |  |

|                               |  |
|-------------------------------|--|
| CAE data                      |  |
| EPLAN Data Portal<br>2020-109 |  |
| WSCAD Universe<br>2020-109    |  |
| ZUKEN Portal<br>2020-109      |  |

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.: 216-243](#)  
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

1.1.2 Locking system

1.1.2.1 Locking system



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

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



1.1.3 Marking

1.1.3.1 Marker



**Item No.: 793-3501**  
WMB marking card; as card; plain; snap-on type; white



**Item No.: 2009-113**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; white

1.1.3.2 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.: 2000-115**  
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.: 734-329**  
Strain relief plate; for female and male connectors; 25 mm wide; 1 part; gray

1.1.7 Tool

1.1.7.1 Operating tool



**Item No.: 210-719**  
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



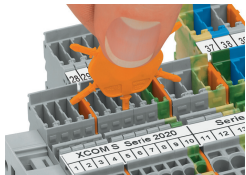
**Item No.: 210-648**  
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; angled; short



**Item No.: 210-647**  
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

Installation Notes

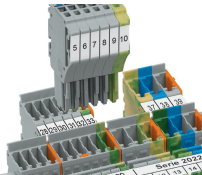
Coding



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

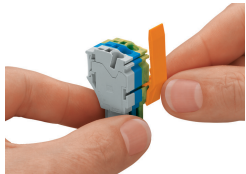


Coding a female plug: remove coding finger using a suitable tool.

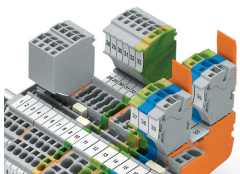


Insert coded female plug into X-COM®S-SYSTEM terminal block assembly.

Locking system



Slide the locking lever into position.



Female plugs can be individually locked.