

Data Sheet | Item Number: 713-1109

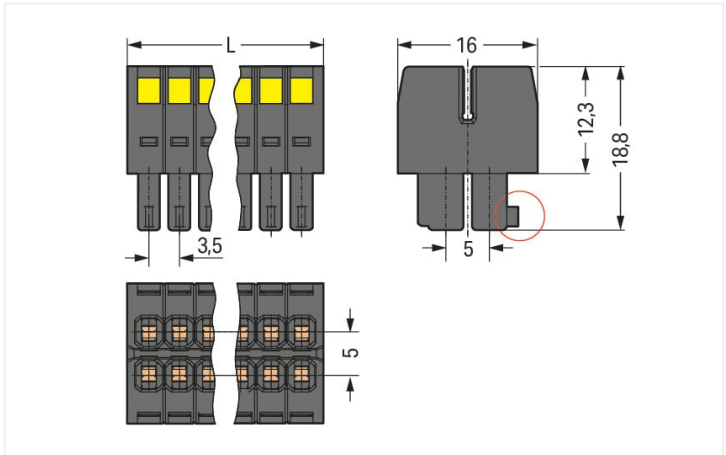
1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 18-pole; 100% protected against mismatching; 1,50 mm²; black

<https://www.wago.com/713-1109>

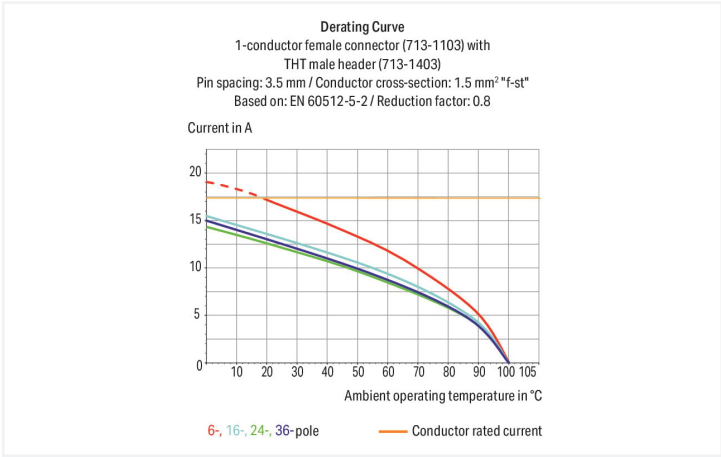


Color: ■ black

Similar to illustration



Dimensions in mm
 $L = [(pole\ no./2) - 1] \times pin\ spacing + 5.2\ mm$
Coding finger (red circle)



- Universal connection for all conductor types
- Unique, compact, double-row connector system for conductor cross-sections up to 1.5 mm²
- High-density, wire-to-board connections in very confined spaces
- Centered strain relief plate anchors conductors, while acting as convenient connection and disconnection handle. It also provides easy access to operating slots – even when wired.
- Coding fingers provide 100% protection against mismatching

| Notes | |
|--------------------|---|
| Safety information | The MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected/disconnected when live or under load. When used as intended, these connectors must not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated. |
| Variants: | Other pole numbers Gold-plated or partially gold-plated contact surfaces Other versions (or variants) can be requested from WAGO Sales or configured at https://configurator.wago.com/ . |



Electrical data

| Ratings per IEC/EN 60664-1 | | | | Approvals per UL 1059 | | | |
|----------------------------|--------|--------|--------|-----------------------|-------|------|---|
| Overvoltage category | III | III | II | Use group | B | C | D |
| Pollution degree | 3 | 2 | 2 | Rated voltage | 300 V | 50 V | - |
| Nominal voltage | 80 V | 160 V | 250 V | Rated current | 10 A | 10 A | - |
| Rated surge voltage | 2.5 kV | 2.5 kV | 2.5 kV | | | | |
| Rated current | 10 A | 10 A | 10 A | | | | |

| Approvals per CSA | | | |
|-------------------|-------|---|---|
| Use group | B | C | D |
| Rated voltage | 300 V | - | - |
| Rated current | 10 A | - | - |

Connection data

| | | | |
|----------------------------|----|---|--|
| Connection points | 18 | Connection 1 | |
| Total number of potentials | 18 | Connection technology | CAGE CLAMP® |
| Number of connection types | 1 | Actuation type | Operating tool |
| Number of levels | 2 | Actuation direction 1 | Operation perpendicular to conductor entry |
| | | Solid conductor | 0.08 ... 1.5 mm² / 28 ... 16 AWG |
| | | Fine-stranded conductor | 0.08 ... 1.5 mm² / 28 ... 16 AWG |
| | | Fine-stranded conductor; with insulated ferrule | 0.25 ... 1 mm² |
| | | Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 1 mm² |
| | | Strip length | 6 ... 7 mm / 0.24 ... 0.28 inches |
| | | Pole number | 18 |
| | | Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|-----------------------|
| Pin spacing | 3.5 mm / 0.138 inches |
| Width | 33 mm / 1.299 inches |
| Height | 18.8 mm / 0.74 inches |
| Depth | 16 mm / 0.63 inches |

Mechanical data

| | |
|--------------------------|-----|
| Variable coding | Yes |
| Anti-rotation protection | Yes |

Plug-in connection

| | |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type) | for conductor |
| Mismating protection | Yes |



| Material data | |
|-----------------------------|--|
| Note (material data) | Information on material specifications can be found here |
| Color | black |
| Material group | II |
| Insulation material | Glass fiber-reinforced polyamide (PA66 GF) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome-nickel spring steel (CrNi) |
| Contact material | Copper alloy |
| Contact plating | Tin |
| Fire load | 0.137 MJ |
| Weight | 9.2 g |

| Environmental requirements | |
|----------------------------|-----------------|
| Limit temperature range | -60 ... +100 °C |
| Processing temperature | -35 ... +60 °C |

| Commercial data | |
|-----------------------|------------------------|
| Product Group | 3 (Multi Conn. System) |
| eCl@ss 10.0 | 27-14-11-06 |
| eCl@ss 9.0 | 27-14-11-06 |
| ETIM 8.0 | EC001284 |
| ETIM 7.0 | EC001284 |
| PU (SPU) | 25 pcs |
| Packaging type | Box |
| Country of origin | PL |
| GTIN | 4045454667368 |
| Customs tariff number | 85366990990 |

| Environmental Product Compliance | |
|----------------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---------------------------------------|-----------|---------------------------------|
| CB DEKRA Certification B.V. | IEC 61984 | NL-102427 |
| CSA CSA Group | C22.2 | 2315087 |
| KEMA/KEUR DEKRA Certification B.V. | EN 61984 | 71-133740 |
| UL Underwriters Laboratories Inc. | UL 1059 | UL-US-L45172-6187124-22905991-1 |



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 713-1109

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Documentation

Additional Information

Technical Section

03.04.2019

pdf

2027.26 KB

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CAD/CAE-Data

CAD data

2D/3D Models 713-1109

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CAE data

ZUKEN Portal 713-1109

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1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



Item No.: 713-1429/105-000/997-407
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1429/105-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1409/105-000/997-407
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1409/105-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1429
THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1409
THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1469
THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; with orientation nose; Pin spacing 3.5 mm; 18-pole; black


1.2 Optional Accessories

1.2.1 Ferrule


1.2.1.1 Ferrule




Item No.: 216-301
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow




Item No.: 216-321
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-151
Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated




Item No.: 216-131
Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



Item No.: 216-302
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-322
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise






















Item No.: 216-132
Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated



Item No.: 216-152
Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated



1.2.1.1 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.: 216-201 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white |  Item No.: 216-221 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white |  Item No.: 216-141 Ferrule; Sleeve for 0.5 mm² / 20 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 |
|  Item No.: 216-101 Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; electro-tin plated; silver-colored |  Item No.: 216-121 Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; electro-tin plated; silver-colored |  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.: 216-202 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray |  Item No.: 216-222 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray |  Item No.: 216-142 Ferrule; Sleeve for 0.75 mm² / 18 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 |  Item No.: 216-102 Ferrule; Sleeve for 0.75 mm² / AWG 20; un-insulated; electro-tin plated; silver-colored |
|  Item No.: 216-122 Ferrule; Sleeve for 0.75 mm² / AWG 20; un-insulated; electro-tin plated; silver-colored |  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.: 216-203 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red |
|  Item No.: 216-223 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red |  Item No.: 216-103 Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated |  Item No.: 216-143 Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 |  Item No.: 216-123 Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated; silver-colored |

1.2.2 Stickers with operating instructions

1.2.2.1 Stickers with operating instructions



Item No.: 210-493
Stickers for operating instructions

1.2.3 Strain relief

1.2.3.1 Strain relief plate



Item No.: 713-127
Strain relief plate; for female connectors; 25 mm wide; 1 part; Pin spacing 3.5 mm; black

1.2.4 Tool

1.2.4.1 Operating tool

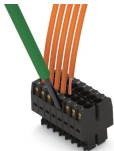


Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

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

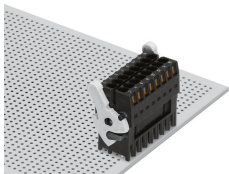
Installation Notes

Conductor termination

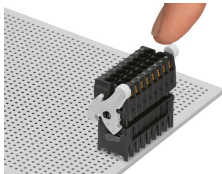


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

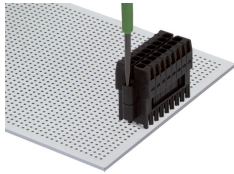
Locking system



Lever as a lock – when closed, female connector is locked.

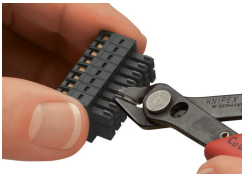


Lever as a disconnection aid – when opened, female connector is disconnected. Rotating the lever lifts the female connector out of the male header.



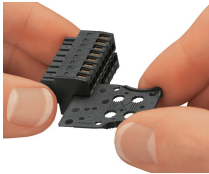
Screw interlock can only be disconnected using a tool.

Coding

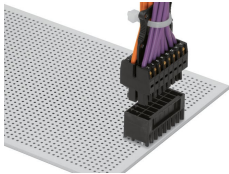


Coding a female connector by removing coding finger(s).

Strain relief



Strain relief plate for field assembly



Centered strain relief plate anchors conductors for easy disconnection.