

Data Sheet | Item Number: 713-1105/037-000/036-000

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 10-pole; 100% protected against mismatching; Levers; Strain relief plate; 1,50 mm²; black

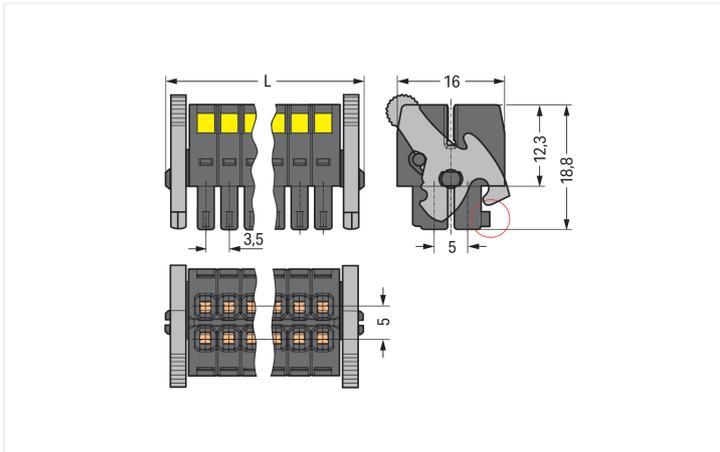
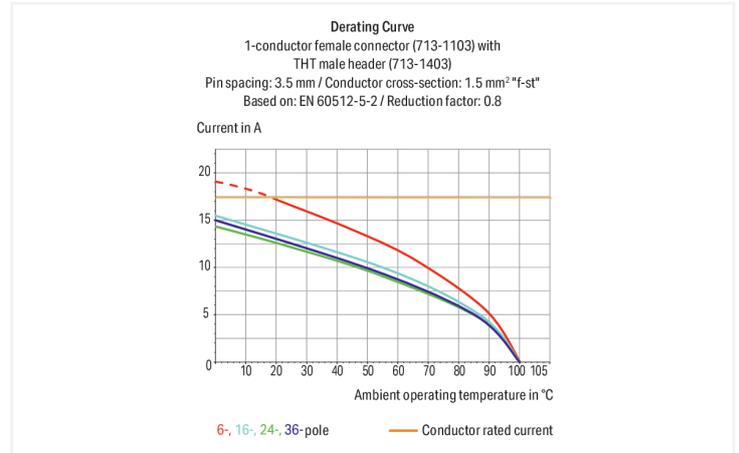


<https://www.wago.com/713-1105/037-000/036-000>



Color: ■ black

Similar to illustration



Dimensions in mm

$L = [(pole\ no./2) - 1] \times pin\ spacing + 12.2\ mm$ Coding finger (red circle)

Female connector, 713 Series, black

This female connector (item number 713-1105/037-000/036-000) simplifies electrical installations. Ensure that the strip lengths are between 6 and 7 mm when connecting conductors to this female connector. This product features one conductor terminal and utilizes CAGE CLAMP®. Our renowned universal connection known as CAGE CLAMP® leads the way when it comes to connection technology and electrical interconnections. Dimensions: (26.2 x 38.7 x 16) mm (width x height x depth). Depending on the type of conductor, this female connector is suitable for conductor cross sections ranging from 0.08 mm² to 1.5 mm².

Tin is used for coating the contact surfaces. The strain relief plate is a safety precaution for connected conductors that also makes cables easier to handle.

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 impulse withstand 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

| | | | |
|----------------------------|----|---|--|
| Clamping units | 10 | Connection 1 | |
| Total number of potentials | 10 | 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 mm ² / 28 ... 16 AWG |
| | | Fine-stranded conductor | 0.08 ... 1.5 mm ² / 28 ... 16 AWG |
| | | Fine-stranded conductor; with insulated ferrule | 0.25 ... 1 mm ² |
| | | Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 1 mm ² |
| | | Strip length | 6 ... 7 mm / 0.24 ... 0.28 inches |
| | | Pole number | 10 |
| | | Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|------------------------|
| Pin spacing | 3.5 mm / 0.138 inches |
| Width | 26.2 mm / 1.031 inches |
| Height | 16.5 mm / 0.65 inches |
| Depth | 43.7 mm / 1.72 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 |
| Mismatching protection | 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 | black |
| Material group | II |
| Insulation material (main housing) | 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 | 0.103 MJ |
| Weight | 6.9 g |

Environmental requirements

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

Environmental Testing

| | |
|---|---|
| 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 |

Environmental Testing

| | |
|---|---|
| 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) | 50 pcs |
| Packaging type | Box |
| Country of origin | PL |
| GTIN | 4055143456661 |
| 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

| | |
|---|--|
| REACH Candidate List Substance | Perfluorobutane sulfonic acid (PFBS) and its salts |
| RoHS Compliance Status | Compliant, No Exemption |
| SCIP notification number (Austria) | 5bc28b48-272b-4e99-970f-74d08d1c6417 |
| SCIP notification number (Belgium) | 7dc2c8bb-bf92-4057-88b0-3a6f15616684 |
| SCIP notification number (Bulgaria) | bbd65105-4586-4db7-95b3-5257ab7687c7 |
| SCIP notification number (Czech Republic) | eb5b1dc5-2885-484a-827a-8a787101030d |
| SCIP notification number (Denmark) | 8ea107ed-9e62-49db-a13b-710d9d35e653 |
| SCIP notification number (Finland) | 8f143a0f-fc8c-486c-b1e9-b68c424735b4 |
| SCIP notification number (France) | f74233cf-3941-4d9f-abd9-1f6495b1f4ed |
| SCIP notification number (Germany) | 0a90e086-3122-4c15-b61a-40ed32d97039 |
| SCIP notification number (Hungary) | 438c0dd1-5ca3-4a5a-ba75-878893a7dc30 |
| SCIP notification number (Italy) | 210e4a88-9c36-411b-afb9-497dfe7313cd |
| SCIP notification number (Netherlands) | 9d2d750e-e93f-431c-86e8-3f27d3b1207d |
| SCIP notification number (Poland) | 20d74cb8-4f48-42b1-b0c1-0a91dc6b00fb |
| SCIP notification number (Romania) | 9154c3ce-5e7a-4168-a45a-7c476def03e0 |
| SCIP notification number (Sweden) | 92bbed3e-0d50-4e46-a4f9-ad2b936fcac2 |

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 |

Declarations of conformity and manufacturer's declarations



| Approval | Standard | Certificate Name |
|-------------------------------|----------|------------------|
| Railway WAGO GmbH & Co. KG | - | Z00004422.000 |

Downloads

Environmental Product Compliance

Compliance Search



Documentation

Additional Information

| | | | |
|-------------------|------------|-------------------|--|
| Technical Section | 03.04.2019 | pdf 2027.26 KB | |
|-------------------|------------|-------------------|--|

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



Item No.: 713-1425/116-000/997-406
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Levers; in tape-and-reel packaging; Pin spacing 3.5 mm; 10-pole; black

Item No.: 713-1425/116-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 10-pole; black

Item No.: 713-1405/116-000/997-406
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Levers; in tape-and-reel packaging; Pin spacing 3.5 mm; 10-pole; black

Item No.: 713-1405/116-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 10-pole; black



Item No.: 713-1425/037-000
THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 10-pole; black

Item No.: 713-1405/037-000
THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 10-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.: 216-131

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.: 216-201

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white



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.: 216-221

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; uninsulated; 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; uninsulated; electro-tin plated; silver-colored



Item No.: 216-121

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; 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; uninsulated; 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; uninsulated; electro-tin plated; silver-colored



Item No.: 216-122

Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; 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; uninsulated; electro-tin plated



Item No.: 216-143

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; 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; uninsulated; 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.: 713-130

Strain relief plate; for female connectors; 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

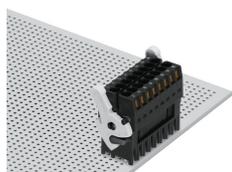
Installation Notes

Conductor termination

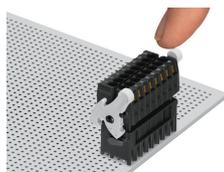


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

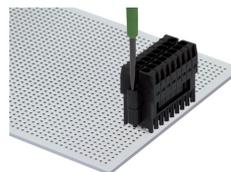
Locking system



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.



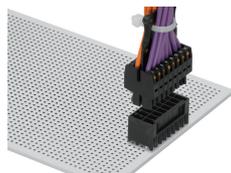
Screw interlock can only be disconnected using a tool.

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.