

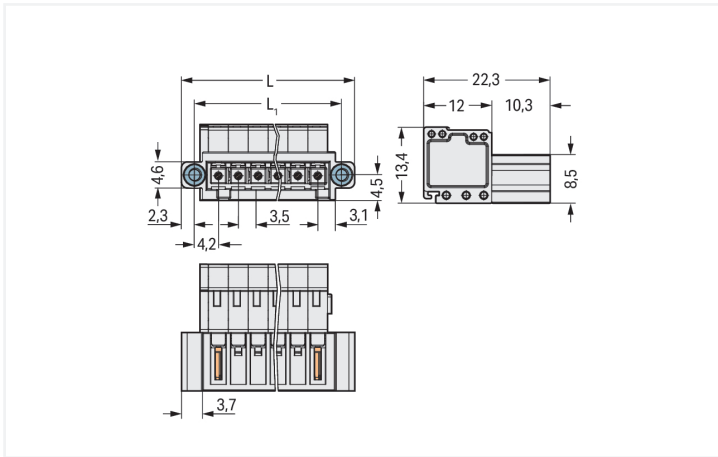
Data Sheet | Item Number: 734-312/109-000

1-conductor male connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 12-pole; 100% protected against mismatching; Threaded flange; light gray

<https://www.wago.com/734-312/109-000>



Color: ■ light gray



Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 9.5$ mm
 $L_1 = (\text{pole no.} \times \text{pin spacing}) + 4.9$ mm

Male connector, 734 Series, with 3.5 mm pin spacing

This male connector (item number 734-312/109-000) simplifies electrical installations. Conductors can only be connected to this male connector if their strip length is between 6 and 7 mm. This product features one conductor terminal and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection provides a safe and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. The dimensions are (51.5 x 13.4 x 22.3) mm (width x height x depth). This male connector is suitable for conductor cross sections ranging from 0.08 mm² to 1.5 mm².

The contact surface is coated with tin.

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 | | |
|---------------------------------|----------------|--------|--------|---------------|-----------|---|-------|
| | III | III | II | | Use group | B | C |
| Overvoltage category | III | III | II | Use group | B | C | D |
| Pollution degree | 3 | 2 | 2 | Rated voltage | 300 V | - | 300 V |
| Nominal voltage | 160 V | 160 V | 320 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 | - | 300 V |
| Rated current | 10 A | - | 10 A |

Connection Data

| | | | |
|----------------------------|----|---|--|
| Clamping units | 12 | Connection 1 | |
| Total number of potentials | 12 | Connection technology | CAGE CLAMP® |
| Number of connection types | 1 | Actuation type | Operating tool |
| Number of levels | 1 | Actuation direction 1 | Operation parallel to conductor entry |
| | | Actuation direction 2 | Operation perpendicular to conductor entry |
| | | Solid conductor | 0.08 ... 1.5 mm ² / 28 ... 14 AWG |
| | | Fine-stranded conductor | 0.08 ... 1.5 mm ² / 28 ... 14 AWG |
| | | Fine-stranded conductor; with insulated ferrule | 0.25 ... 1.5 mm ² |
| | | Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 1.5 mm ² |
| | | Note (conductor cross-section) | Terminating 1.5 mm ² conductors is possible; however insulation diameter does not allow clamping units to be terminated in a row. |
| | | Strip length | 6 ... 7 mm / 0.24 ... 0.28 inches |
| | | Pole number | 12 |
| | | Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|------------------------|
| Pin spacing | 3.5 mm / 0.138 inches |
| Width | 51.5 mm / 2.028 inches |
| Height | 13.4 mm / 0.528 inches |
| Depth | 22.3 mm / 0.878 inches |

Mechanical data

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

Plug-in connection

| | |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| Connector (connection type) | for conductor |
| Mismating protection | Yes |
| Locking of plug-in connection | Threaded flange |

Material data

| | |
|------------------------------------|--|
| Note (material data) | Information on material specifications can be found here |
| Color | light gray |
| Material group | I |
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome-nickel spring steel (CrNi) |
| Contact material | Electrolytic copper (E _{Cu}) |
| Contact Plating | Tin |
| Fire load | 0.179 MJ |
| Weight | 10.5 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 Hz to f ₂ = 150 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 Hz to f ₂ = 150 Hz |
| Acceleration | 0.572g (highest test level used for all axes) |
| Test duration per axis | 5 h |

Environmental Testing

| | |
|---|---|
| Test directions | X, Y and Z axes |
| Extended testing: Monitoring of contact faults and interruptions | Passed |
| Extended testing: Voltage drop measurement before and after each axis | Passed |
| Shock test | Test passed according to Section 10 of the standard |
| Shock pulse form | Half sine |
| Acceleration | 5g (highest test level used for all axes) |
| Shock duration | 30 ms |
| Number of shocks (per axis) | 3 pos. und 3 neg. |
| Test directions | X, Y and Z axes |
| Extended testing: Monitoring of contact faults and interruptions | Passed |
| Extended testing: Voltage drop measurement before and after each axis | Passed |
| Vibration and shock stress for rolling stock equipment | Passed |

Commercial data

| | |
|-----------------------|------------------------|
| Product Group | 3 (Multi Conn. System) |
| PU (SPU) | 50 pcs |
| Packaging type | Box |
| Country of origin | PL |
| GTIN | 4055143266475 |
| Customs tariff number | 85366930000 |

Product Classification

| | |
|-------------|----------------------|
| UNSPSC | 39121409 |
| eCl@ss 10.0 | 27-44-03-09 |
| eCl@ss 9.0 | 27-44-03-09 |
| ETIM 9.0 | EC002638 |
| ETIM 10.0 | EC002638 |
| ECCN | NO US CLASSIFICATION |

Environmental Product Compliance

| | |
|---|--------------------------------------|
| RoHS Compliance Status | Compliant,With Exemption |
| RoHS Exemption | 6(c) |
| SCIP notification number (Austria) | 1035d3ff-0ab4-433e-bfde-a1dc27ae3dcc |
| SCIP notification number (Belgium) | f242e9aa-0c14-4f23-ba56-1ac8fd1f87ae |
| SCIP notification number (Bulgaria) | e20bf10f-f8eb-494f-a8fd-b2c01f192a90 |
| SCIP notification number (Czech Republic) | 0cdafad1-bdb9-471c-a2b6-034e1bb028ff |
| SCIP notification number (Denmark) | 5f6a43f2-3cd7-4f2e-98ce-c1b1f8381475 |
| SCIP notification number (Finland) | 96b7e287-296e-41bf-ae70-3b803bcb11a5 |
| SCIP notification number (France) | 6d104f28-e7df-4dab-acaf-7336971a6d72 |
| SCIP notification number (Germany) | c10e14f9-b5ed-4e58-bd48-39466935db2a |
| SCIP notification number (Hungary) | 73f15f34-41a6-492e-bff2-076efded167a |
| SCIP notification number (Italy) | 44edb7b1-9fdd-453f-838c-59b8f1d92291 |
| SCIP notification number (Netherlands) | f43bbbe0-e5ab-4f8d-b45e-275a32099d37 |
| SCIP notification number (Poland) | 424b4354-f7c7-4499-b235-9158af5765b6 |
| SCIP notification number (Romania) | 7df5780d-0935-428a-b623-db5354f080a5 |
| SCIP notification number (Sweden) | 5a84ee26-352c-42d3-b78c-f72e5484f99e |

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---------------------------------------|----------|------------------|
| CB DEKRA Certification B.V. | EN 61984 | NL-54190 |
| CSA DEKRA Certification B.V. | C22.2 | 1465035 |
| KEMA/KEUR DEKRA Certification B.V. | EN 61984 | 71-105522 |
| UL Underwriters Laboratories Inc. | UL 1977 | E 45171 |

Declarations of conformity and manufacturer's declarations



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

Approvals for marine applications



| Approval | Standard | Certificate Name |
|-------------------------------|-----------|-------------------|
| BV Bureau Veritas S.A. | IEC 60998 | 11915/E0 BV |
| DNV DNV GL SE | - | TAE000016Z |
| PRS Polski Rejestr Statków | - | TE/1095/880590/23 |

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product
Compliance
734-312/109-000



Documentation

Additional Information

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

CAD/CAE-Data

CAD data
 2D/3D Models
 734-312/109-000

CAE data
 ZUKEN Portal
 734-312/109-000

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 734-112/107-000
 1-conductor female connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 12-pole; 100% protected against mismatching; Screw flange; light gray

Item No.: 2734-112/107-000
 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 12-pole; 100% protected against mismatching; Screw flange; light gray

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding

Item No.: 734-130
 Coding key; to be snapped above top level; white

1.2.2 Cover

1.2.2.1 Cover

Item No.: 734-420
 Cover for male connectors; for 734 Series; IP20 protection; black

1.2.3 Ferrule

1.2.3.1 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

1.2.3.1 Ferrule

| | | | |
|---|---|---|---|
|  Item No.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white |  Item No.: 216-141 Ferrule; Sleeve for 0.5 mm ² / 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 mm ² / AWG 22; un-insulated; electro-tin plated; silver-colored |  Item No.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; un-insulated; electro-tin plated; silver-colored |
|  Item No.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 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 mm ² / 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 mm ² / 18 AWG; insulated; electro-tin plated; gray |  Item No.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray |
|  Item No.: 216-142 Ferrule; Sleeve for 0.75 mm ² / 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 mm ² / AWG 20; un-insulated; electro-tin plated; silver-colored |  Item No.: 216-122 Ferrule; Sleeve for 0.75 mm ² / AWG 20; un-insulated; electro-tin plated; silver-colored |  Item No.: 216-243 Ferrule; Sleeve for 1 mm ² / 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 mm ² / 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 mm ² / AWG 18; insulated; electro-tin plated; red |  Item No.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red |  Item No.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; un-insulated; electro-tin plated |
|  Item No.: 216-143 Ferrule; Sleeve for 1 mm ² / 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 mm ² / AWG 18; un-insulated; electro-tin plated; silver-colored |  Item No.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black |  Item No.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black |
|  Item No.: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black |  Item No.: 216-264 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black |  Item No.: 216-284 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black |  Item No.: 216-124 Ferrule; Sleeve for 1.5 mm ² / AWG 16; un-insulated; electro-tin plated |
|  Item No.: 216-144 Ferrule; Sleeve for 1.5 mm ² / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored |  Item No.: 216-104 Ferrule; Sleeve for 1.5 mm ² / AWG 16; un-insulated; electro-tin plated; silver-colored | | |

1.2.4 Marking

1.2.4.1 Marking strip

| | | |
|--|---|--|
|  Item No.: 210-332/350-202 Marking strips; as a DIN A4 sheet; MARKED; 1-16 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white |  Item No.: 210-332/350-204 Marking strips; as a DIN A4 sheet; MARKED; 17-32 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white |  Item No.: 210-332/350-206 Marking strips; as a DIN A4 sheet; MARKED; 33-48 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white |
|--|---|--|

1.2.5 Test and measurement

1.2.5.1 Testing accessories



Item No.: 735-500

WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm²

1.2.6 Tool

1.2.6.1 Operating tool



Item No.: 734-190

Combination operating tool; natural



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



Item No.: 210-251

Operating tool; for MCS MICRO and MINI with CAGE CLAMP® connection; yellow



Item No.: 210-250

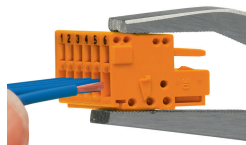
Operating tool; for MCS MINI and MIDI with CAGE CLAMP® connection; red

Item No.: 734-191

Operating tool; made of insulating material; 1-way; loose; black

Installation Notes

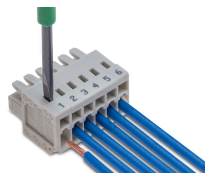
Conductor termination



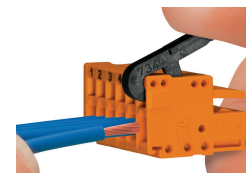
Inserting a conductor into CAGE CLAMP® unit via operating tool (210-251 or 210-250).



Inserting a conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.

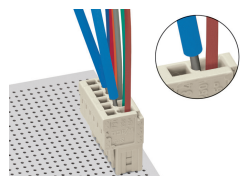


Inserting a conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



Inserting a conductor into CAGE CLAMP® unit via operating tool (734-191).

Testing



Testing via 1 mm Ø test pin (735-500) – CAGE CLAMP® connection – touch contact.

Marking



Labeling via direct marking or self-adhesive strips.

Installation



Strain relief housing for 734 Series Male and Female Connectors with CAGE CLAMP® connection