

Data Sheet | Item Number: 733-104

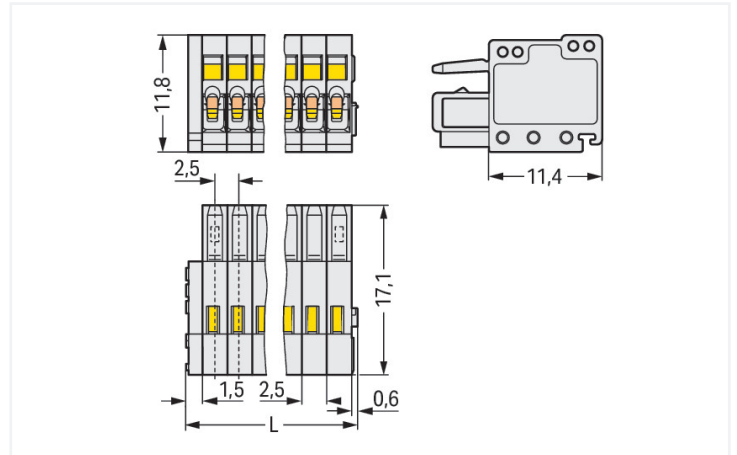
1-conductor female connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 4-pole; 100% protected against mismatching; 0,50 mm²; light gray

<https://www.wago.com/733-104>



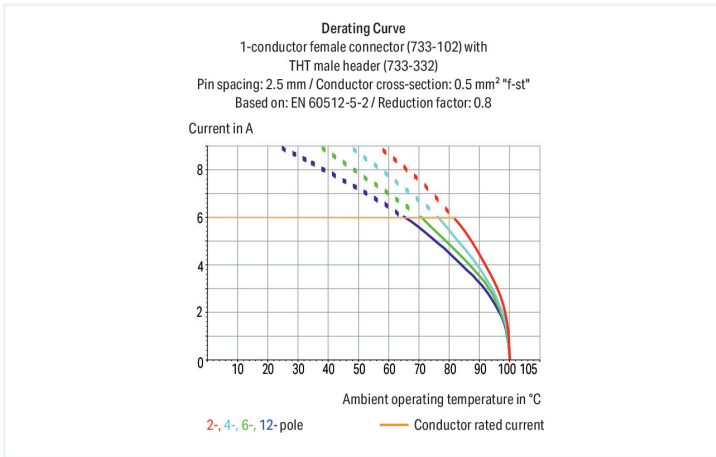
Color: light gray

Similar to illustration



Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 2.1 \text{ mm}$



- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- Strain relief plates for factory and field assembly
- 100% protected against mismatching
- Coding option available

Notes

Safety information 1

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

| | |
|-------------------------------|--|
| Ratings per | IEC/EN 60664-1 |
| Nominal voltage (III/3) | 100 V |
| Rated impulse voltage (III/3) | 2.5 kV |
| Rated voltage (III/2) | 160 V |
| Rated impulse voltage (III/2) | 2.5 kV |
| Nominal voltage (II/2) | 320 V |
| Rated surge voltage (II/2) | 2.5 kV |
| Rated current | 6 A |
| Legend (ratings) | (III / 2) Δ Overvoltage category III / Pollution degree 2 |

Ratings per UL 1059

| | |
|--------------------------------|---------|
| Approvals per | UL 1059 |
| Rated voltage UL (Use Group B) | 150 V |
| Rated current UL (Use Group B) | 4 A |

Ratings per CSA

| | |
|---------------------------------|-------|
| Approvals per | CSA |
| Rated voltage CSA (Use Group B) | 150 V |
| Rated current CSA (Use Group B) | 4 A |

Connection data

| | |
|----------------------------|---|
| Connection points | 4 |
| Total number of potentials | 4 |
| Number of connection types | 1 |
| Number of levels | 1 |

Connection 1

| | |
|---|--|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Actuation direction 1 | Operation parallel to conductor entry |
| Actuation direction 2 | Operation perpendicular to conductor entry |
| Solid conductor | 0.08 ... 0.5 mm ² / 28 ... 20 AWG |
| Fine-stranded conductor | 0.08 ... 0.5 mm ² / 28 ... 20 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 ... 0.34 mm ² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 0.34 mm ² |
| Strip length | 5 ... 6 mm / 0.2 ... 0.24 inches |
| Pole number | 4 |
| Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|------------------------|
| Pin spacing | 2.5 mm / 0.098 inches |
| Width | 12.1 mm / 0.476 inches |
| Height | 11.8 mm / 0.465 inches |
| Depth | 17.1 mm / 0.673 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 | light gray |
| Material group | I |
| Insulation material | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome-nickel spring steel (CrNi) |
| Contact material | Copper alloy |
| Contact plating | Tin |
| Fire load | 0.034 MJ |
| Weight | 1.8 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 | 27-44-03-09 |
| eCl@ss 9.0 | 27-44-03-09 |
| ETIM 8.0 | EC002638 |
| ETIM 7.0 | EC002638 |
| PU (SPU) | 200 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4044918294003 |
| Customs tariff number | 85366990990 |

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|--------------------------------------|-----------|------------------|
| CCA DEKRA Certification B.V. | EN 61984 | 2169534.01 |
| CCA DEKRA Certification B.V. | IEC 61984 | NL-31141 |
| CSA DEKRA Certification B.V. | C22.2 | 1465035 |
| UL UL International Germany GmbH | UL 1977 | E45171 |
| UR Underwriters Laboratories Inc. | UL 1059 | E45172 |

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 |
|---|-----------|------------------|
| ABS American Bureau of Ship- ping | - | 19-HG1869876-PDA |
| DNV GL Det Norske Veritas, Ger- manischer Lloyd | - | TAE000016Z |
| LR Lloyds Register | IEC 61984 | 96/20035 (E5) |

Downloads

Environmental Product Compliance

| Compliance Search |
|---|
| Environmental Product Compliance 733-104 |

Documentation

| Additional Information |
|---|
| Technical Section 03.04.2019 pdf 1949.09 KB |

CAD/CAE-Data

| CAD data |
|----------------------|
| 2D/3D Models 733-104 |

| CAE data |
|------------------------------|
| EPLAN Data Portal 733-104 |
| ZUKEN Portal 733-104 |

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug

| | | | |
|---|---|---|---|
| <p>Item No.: 733-204 1-conductor male connector; CAGE CLAMP®; 0,5 mm²; Pin spacing 2.5 mm; 4-pole; 100% protected against mismatching; 0,50 mm²; light gray</p> | <p>Item No.: 733-204/032-000 1-conductor male connector; CAGE CLAMP®; 0,5 mm²; Pin spacing 2.5 mm; 4-pole; 100% protected against mismatching; Strain relief plate; 0,50 mm²; light gray</p> | <p>Item No.: 733-364/105-604/997-406 THR male header; 0,8 x 0,8 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 2.5 mm; 4-pole; black</p> | <p>Item No.: 733-364/105-604 THR male header; 0,8 x 0,8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 2.5 mm; 4-pole; black</p> |
| <p>Item No.: 733-334/105-604/997-446 THR male header; 0,8 x 0,8 mm solder pin; straight; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 2.5 mm; 4-pole; black</p> | <p>Item No.: 733-334/105-604 THR male header; 0,8 x 0,8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 2.5 mm; 4-pole; black</p> | <p>Item No.: 733-364 THR male header; 0,8 x 0,8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 2.5 mm; 4-pole; light gray</p> | <p>Item No.: 733-334 THR male header; 0,8 x 0,8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 2.5 mm; 4-pole; light gray</p> |

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

1.2.2 Marking

1.2.2.1 Marking strip



Item No.: 210-331/250-202
 Marking strips; as a DIN A4 sheet; MARKED; 1-16 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-331/250-207
 Marking strips; as a DIN A4 sheet; MARKED; 1-48 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-331/250-204
 Marking strips; as a DIN A4 sheet; MARKED; 17-32 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-331/250-206
 Marking strips; as a DIN A4 sheet; MARKED; 33-48 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

1.2.3 Strain relief

1.2.3.1 Strain relief plate



Item No.: 734-127
 Strain relief plate; for female and male connectors; 6 mm wide; 1 part; Pin spacing 3.5 mm; light gray

1.2.4 Test and measurement

1.2.4.1 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

1.2.5 Tool

1.2.5.1 Operating tool



Item No.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



Item No.: 210-251

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



Item No.: 233-335

Operating tool; green



Item No.: 233-331

Operating tool; insulated; yellow



Item No.: 733-130

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



Item No.: 733-191

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

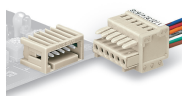


Item No.: 233-332

Operating tool; made of insulating material; white

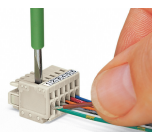
Installation Notes

Mismatching protection

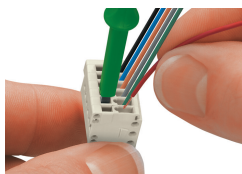


Male headers and female connectors are 100% protected against mismatching. Only mating halves with the same pole number can be connected.

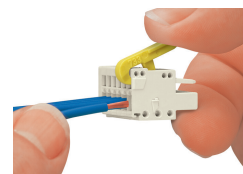
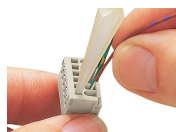
Conductor termination



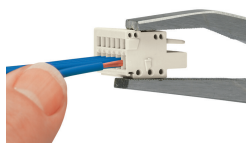
Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



Conductor termination via screwdriver (233-335) – parallel to CAGE CLAMP® actuation



Conductor termination via operating tool (733-191)



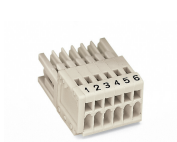
Conductor termination via operating tool (210-251)

Coding

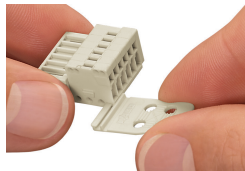


Coding a female connector – removing coding finger(s).

Marking



Installation



Strain relief plates for factory or in-the-field assembly

Testing



Testing via 1 mm Ø test pin (735-500), touch contact.