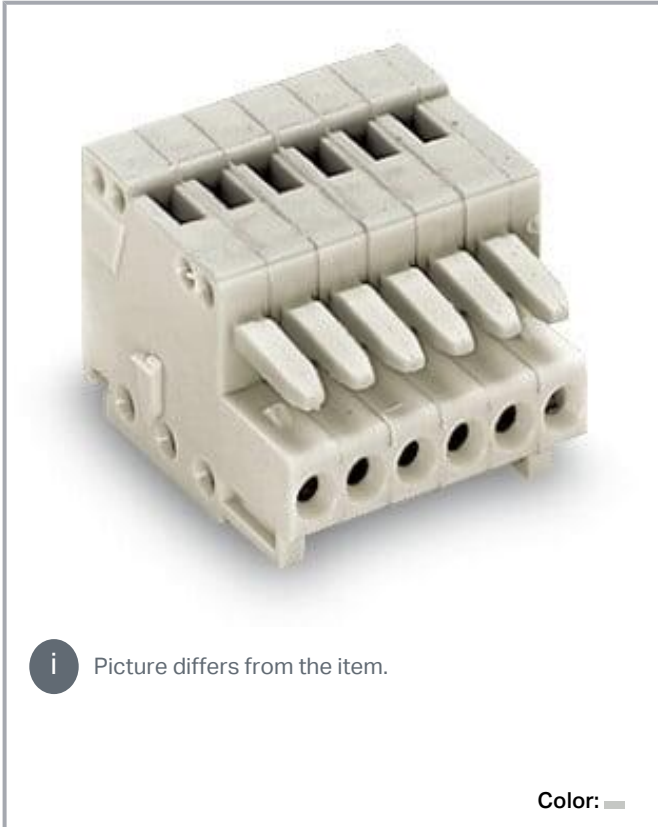


Data sheet | Item number: 733-109

1-conductor female connector; CAGE CLAMP®; 0.5 mm²; Pin spacing 2.5 mm; 9-pole; 100% protected against mismatching; 0,50 mm²; light gray

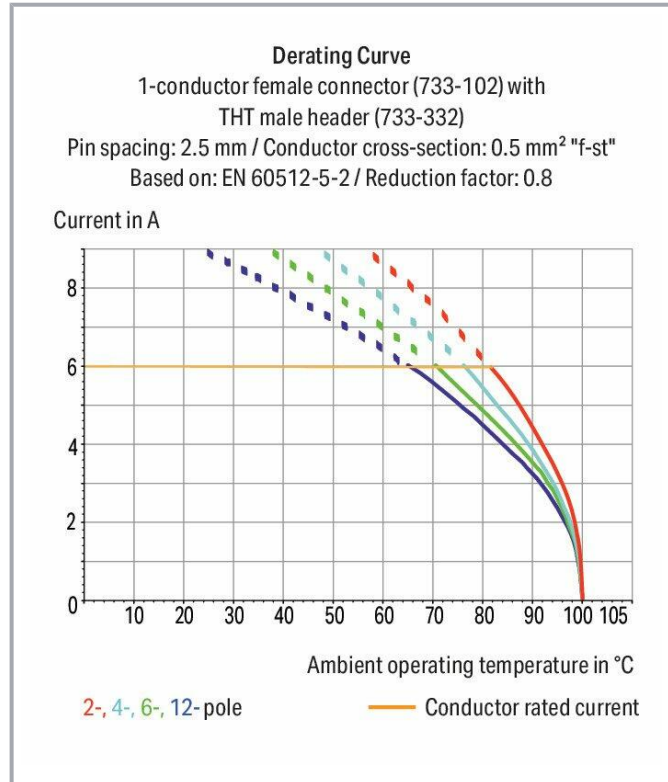


www.wago.com/733-109



i Picture differs from the item.

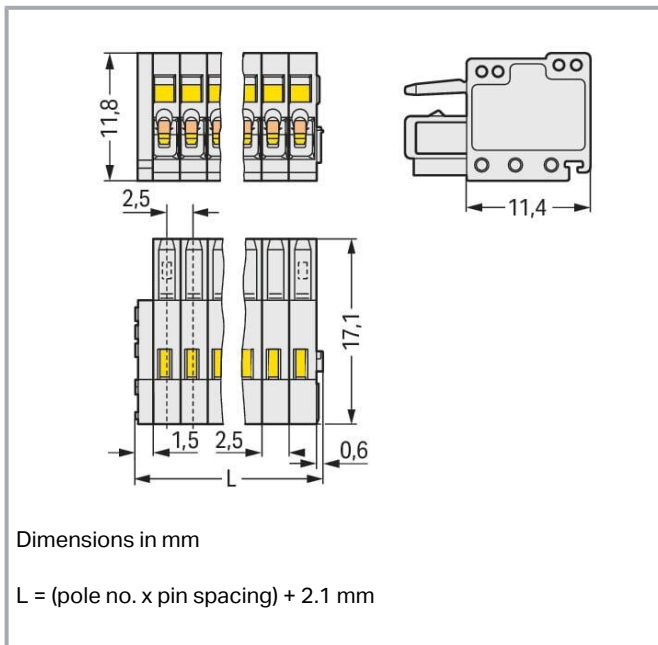
Color:



Subject to changes. Please also observe the further product documentation!

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Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Item description

- 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

Data

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/>.

Subject to changes. Please also observe the further product documentation!

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) \triangleq 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 | 9 |
| Total number of potentials | 9 |
| 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 |

Subject to changes. Please also observe the further product documentation!



| | |
|---|----------------------------------|
| 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 | 9 |
| Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|------------------------|
| Pin spacing | 2.5 mm / 0.098 inches |
| Width | 24.6 mm / 0.969 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 |
| Plugging without loss of pin spacing | No |
| Locking of plug-in connection | none |

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 | 0.069 MJ |
| Weight | 3.9 g |

Subject to changes. Please also observe the further product documentation!

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) | 100 pcs |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4045454819194 |
| Customs tariff number | 85366990990 |

Environmental Product Compliance

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

Approvals / Certificates


General approvals

| Logo | Approval | Additional Approval Text | 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 |




Subject to changes. Please also observe the further product documentation!






Declarations of conformity and manufacturer's declarations

| Logo | Approval | Additional Approval Text | Certificate name |
|--|--------------------------------------|--------------------------|------------------|
|  | Railway WAGO GmbH & Co. KG | - | Railway Ready |

Approvals for marine applications

| Logo | Approval | Additional Approval Text | Certificate name |
|---|---|--------------------------|--------------------------|
|  | ABS American Bureau of Shipping | - | 19- HG1869876- PDA |
|  | DNV GL Det Norske Veritas, Germanischer Lloyd | - | TAE000016Z |
|  | LR Lloyds Register | IEC 61984 | 96/20035 (E5) |

Counterpart

| | | |
|--|---|--|
|  | Item no.733-209/033-000 1-conductor male connector; CAGE CLAMP®; 0.5 mm ² ; Pin spacing 2.5 mm; 9-pole; 100% protected against mismatching; Strain relief plate; 0,50 mm ² ; light gray | www.wago.com/733-209/033-000 |
|  | Item no.733-209 1-conductor male connector; CAGE CLAMP®; 0.5 mm ² ; Pin spacing 2.5 mm; 9-pole; 100% protected against mismatching; 0,50 mm ² ; light gray | www.wago.com/733-209 |
|  | Item no.733-339 THT male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 2.5 mm; 9-pole; light gray | www.wago.com/733-339 |
| | Item no.733-339/105-604 | |

Subject to changes. Please also observe the further product documentation!



THR male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; Pin spacing 2.5 mm; 9-pole; black www.wago.com/733-339/105-604



Item no. 733-339/105-604/997-446
THR male header; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; in tape-and-reel packaging; Pin spacing 2.5 mm; 9-pole; black www.wago.com/733-339/105-604/997-446



Item no. 733-369/105-604
THR male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Pin spacing 2.5 mm; 9-pole; black www.wago.com/733-369/105-604



Item no. 733-369
THT male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Pin spacing 2.5 mm; 9-pole; light gray www.wago.com/733-369











Item no. 733-369/105-604/997-406
THR male header; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; in tape-and-reel packaging; Pin spacing 2.5 mm; 9-pole; black www.wago.com/733-369/105-604/997-406

Optional accessories

Ferrule

Ferrule

| | | |
|---|--|--|
|  | Item no.: 216-132 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-132 |
|  | Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-131 |
|  | Item no.: 216-152 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-152 |
|  | Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-151 |
|  | Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-301 |
|  | Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-321 |
|  | Item no.: 216-322 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise | www.wago.com/216-322 |
|  | Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise | www.wago.com/216-302 |

Strain relief

Strain relief plate

Subject to changes. Please also observe the further product documentation!



Item no.: 734-128

Strain relief plate; for female and male connectors; 12.5 mm wide; 1 part; Pin spacing 3.5 mm; light gray

www.wago.com/734-128

Marking accessories

Marking strip



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

www.wago.com/210-331/250-207



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

www.wago.com/210-331/250-202



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

www.wago.com/210-331/250-204



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

www.wago.com/210-331/250-206

Testing and measuring

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

www.wago.com/735-500

Tool

Operating tool



Item no.: 210-251

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

www.wago.com/210-251



Item no.: 210-719

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

www.wago.com/210-719



Item no.: 233-332

Operating tool; made of insulating material; white

www.wago.com/233-332



Item no.: 233-331

Operating tool; insulated; yellow

www.wago.com/233-331



Item no.: 233-335

Operating tool; green

www.wago.com/233-335



Item no.: 733-191

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

www.wago.com/733-191

Subject to changes. Please also observe the further product documentation!

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Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



Item no.: 733-130

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

www.wago.com/733-130

Downloads

Documentation

Additional Information

| | | | |
|------------------------|------------|--------|----------|
| Technical Section | 2019 Apr 3 | pdf | Download |
| Technical explanations | | 2.0 MB | |

CAD/CAE-Data

CAE data

| | | | |
|----------------------|--|-----|----------|
| ZUKEN Portal 733-109 | | URL | Download |
|----------------------|--|-----|----------|

CAD data

| | | | |
|----------------------|--|-----|----------|
| 2D/3D Models 733-109 | | URL | Download |
|----------------------|--|-----|----------|

Environmental Product Compliance

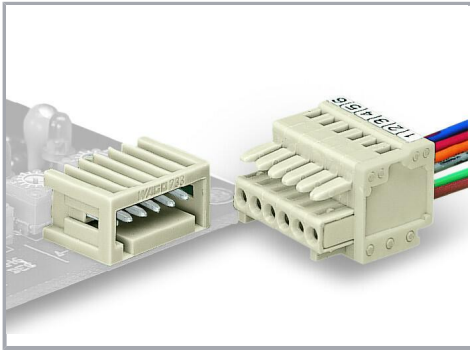
Compliance Search

| | | | |
|--|--|-----|----------|
| Environmental Product Compliance 733-109 | | URL | Download |
| 1-conductor female connector; CAGE CLAMP®; 0.5 mm ² ; Pin spacing 2.5 mm; 9-pole; 100% protected against mismatching; 0,50 mm ² ; light gray | | | |

Installation Notes

Mismatching protection

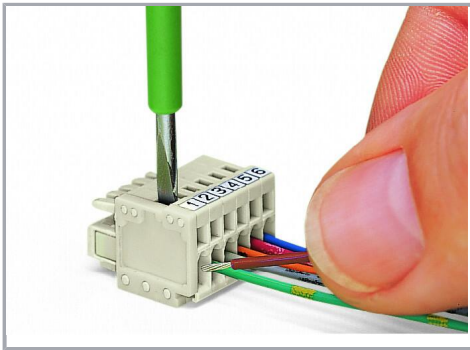
Subject to changes. Please also observe the further product documentation!



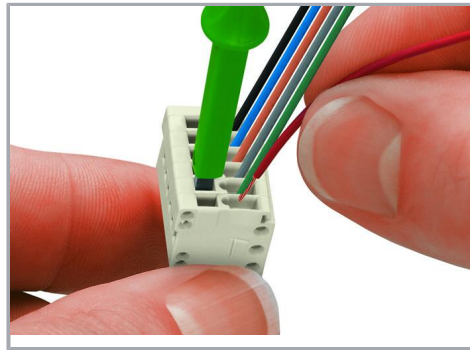
Male headers and female connectors are 100% protected against mismatching.

Only mating halves with the same pole number can be connected.

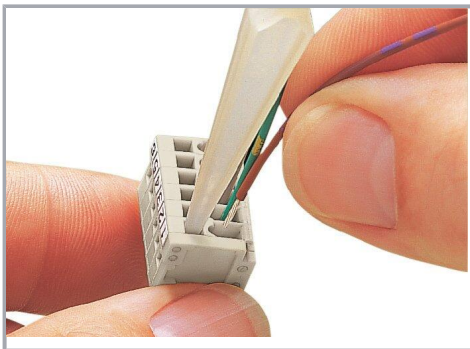
Conductor termination



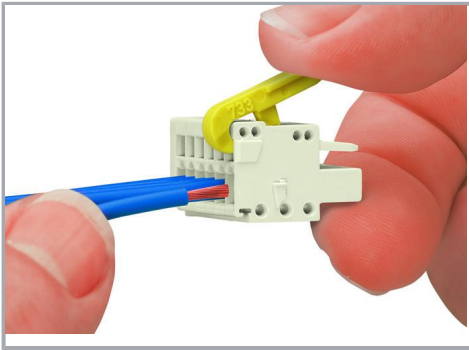
Inserting conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



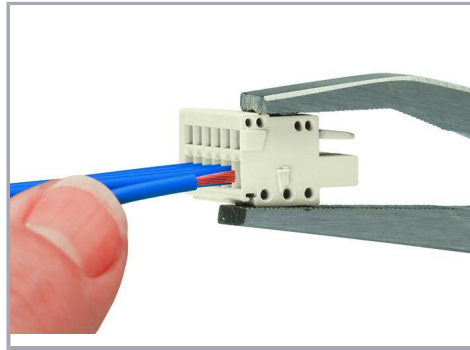
Conductor termination via screwdriver (233-335) – parallel to CAGE CLAMP® actuation



Subject to changes. Please also observe the further product documentation!

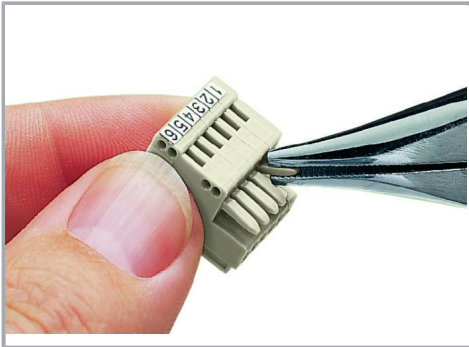


Conductor termination via operating tool (733-191)



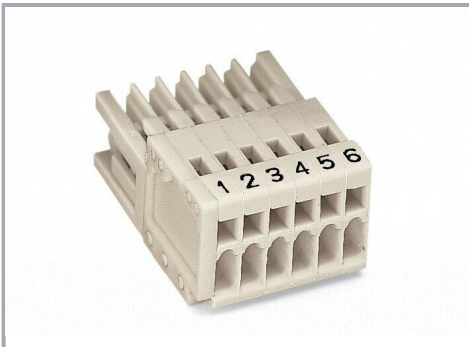
Conductor termination via operating tool (210-251)

Coding



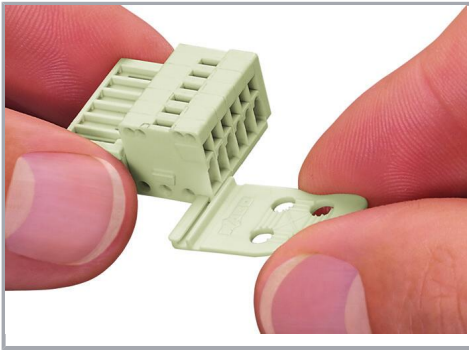
Coding a female connector – removing coding finger(s).

Marking



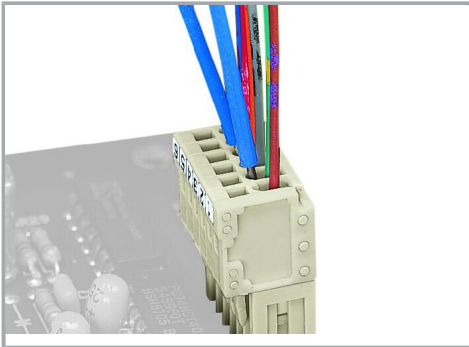
Installation

Subject to changes. Please also observe the further product documentation!



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

Testing



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

Product family

MCS MICRO

[Show all products from the family](#)

Subject to changes. Please also observe the further product documentation!