

## Data sheet | Item number: 734-104

1-conductor female plug; 100% protected against mismatching; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 4-pole; 1,50 mm<sup>2</sup>; light gray



RoHS Compliant

BOMcheck.net

Color:

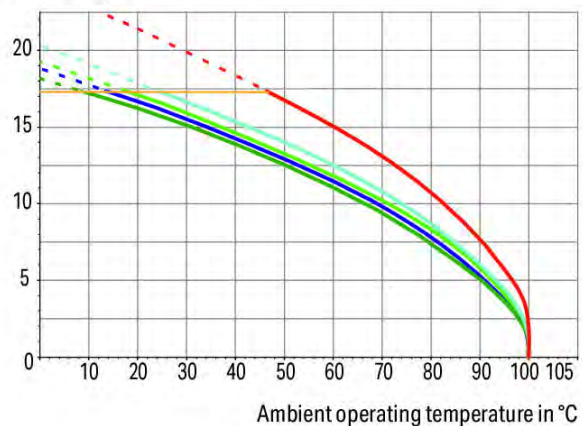
### Derating Curve

1-conductor female connector (734-102) with  
THT male header (734-132)

Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"

Based on: EN 60512-5-2 / Reduction factor: 0.8

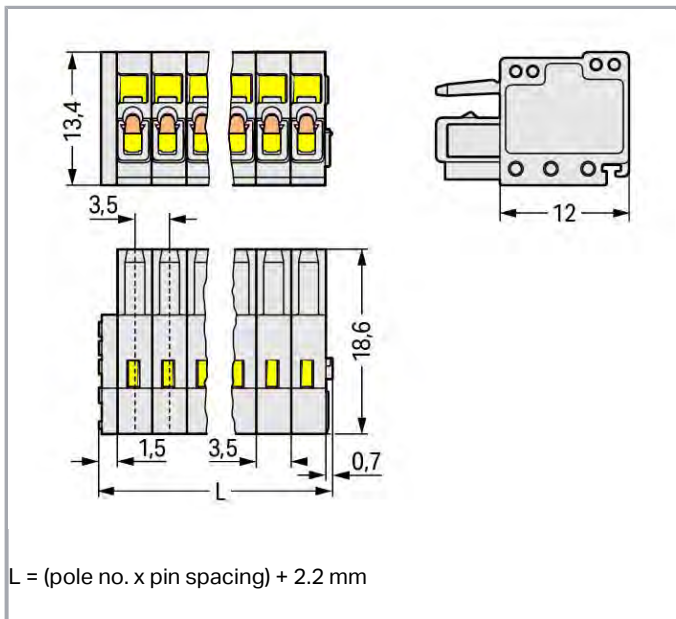
Current in A



2-, 4-, 6-, 12-, 24- pole

Conductor rated current

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



## 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 and housings for field assembly
- 100% protected against mismatching
- Coding via coding fingers

## 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. The circuit design should ensure header pins, which can be touched, are not live when unmated.

## Data

### Electrical data

### Ratings per IEC/EN 60664-1

| Ratings per                 | IEC/EN 60664-1 |
|-----------------------------|----------------|
| Nominal voltage (III/3)     | 160 V          |
| Rated surge voltage (III/3) | 2.5 kV         |
| Rated voltage (III/2)       | 160 V          |
| Rated surge voltage (III/2) | 2.5 kV         |

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



|                            |                                                                      |
|----------------------------|----------------------------------------------------------------------|
| Nominal voltage (II/2)     | 320 V                                                                |
| Rated surge voltage (II/2) | 2.5 kV                                                               |
| Rated current              | 10 A                                                                 |
| Legend (ratings)           | (III / 2) $\triangleq$ Overvoltage category III / Pollution degree 2 |

### Approvals per UL 1059

|                                |         |
|--------------------------------|---------|
| Rated voltage UL (Use Group B) | 300 V   |
| Rated current UL (Use Group B) | 10 A    |
| Rated voltage UL (Use Group D) | 300 V   |
| Rated current UL (Use Group D) | 10 A    |
| Approvals per                  | UL 1059 |

### Approvals per CSA

|                                 |       |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 10 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 10 A  |

### Connection data

|                                                   |                                                                                                                                              |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Connection technology                             | CAGE CLAMP®                                                                                                                                  |
| Actuation type                                    | Operating tool                                                                                                                               |
| Solid conductor                                   | 0,08 ... 1,5 mm <sup>2</sup> / 28 ... 14 AWG                                                                                                 |
| Fine-stranded conductor                           | 0,08 ... 1,5 mm <sup>2</sup> / 28 ... 14 AWG                                                                                                 |
| Fine-stranded conductor; with insulated ferrule   | 0,25 ... 1,5 mm <sup>2</sup>                                                                                                                 |
| Fine-stranded conductor; with uninsulated ferrule | 0,25 ... 1,5 mm <sup>2</sup>                                                                                                                 |
| Strip length                                      | 6 ... 7 mm / 0.24 ... 0.28 inch                                                                                                              |
| Pole No.                                          | 4                                                                                                                                            |
| Total number of connection points                 | 4                                                                                                                                            |
| Total number of potentials                        | 4                                                                                                                                            |
| Number of connection types                        | 1                                                                                                                                            |
| Number of levels                                  | 1                                                                                                                                            |
| Note (conductor cross-section)                    | Terminating 1.5 mm <sup>2</sup> conductors is possible; however insulation diameter does not allow clamping units to be terminated in a row. |
| Conductor entry direction to mating direction     | 0°                                                                                                                                           |

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



## Geometrical Data

|             |                      |
|-------------|----------------------|
| Pin spacing | 3,5 mm / 0.138 inch  |
| Width       | 16,2 mm / 0.638 inch |
| Height      | 13,4 mm / 0.528 inch |
| Depth       | 18,6 mm / 0.732 inch |

## Plug connection

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

## Material Data

|                             |                                   |
|-----------------------------|-----------------------------------|
| Color                       | light gray                        |
| Material group              | I                                 |
| Insulation material         | Polyamide 66 (PA 66)              |
| Flammability class per UL94 | V0                                |
| Clamping spring material    | Chrome nickel spring steel (CrNi) |
| Contact material            | Copper alloy                      |
| Contact plating             | tin-plated                        |
| Fire load                   | 0.052 MJ                          |
| Weight                      | 3.2 g                             |

## Environmental Requirements

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

## Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| Packaging type        | BOX                    |
| Country of origin     | DE                     |
| GTIN                  | 4044918492478          |
| Customs tariff number | 85366990990            |

## Approvals / Certificates

### Country specific Approvals

Certificate

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

| Logo                                                                             | Approval                               | Additional Approval Text | name       |
|----------------------------------------------------------------------------------|----------------------------------------|--------------------------|------------|
|  | <b>CCA</b><br>DEKRA Certification B.V. | EN 61984                 | 2169534.02 |
|  | <b>CSA</b><br>DEKRA Certification B.V. | C22.2                    | 1465035    |

#### Ship Approvals

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

#### UL-Approvals

| Logo                                                                               | Approval                                    | Additional Approval Text | Certificate name    |
|------------------------------------------------------------------------------------|---------------------------------------------|--------------------------|---------------------|
|  | <b>UL</b><br>UL International Germany GmbH  | UL 1977                  | 20150318-<br>E45171 |
|  | <b>UR</b><br>Underwriters Laboratories Inc. | UL 1059                  | 20190122-<br>E45172 |

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

## Counterpart



### Item no.734-134

THT male header; 1.0 x 1.0 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 4-pole; light gray



### Item no.734-134/010-000

THT male header; 1.0 x 1.0 mm solder pin; straight; 100% protected against mismatching; Gold-plated contacts; Pin spacing 3.5 mm; 4-pole; light gray



### Item no.734-134/046-000

THT male header; 1.0 x 1.0 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 4-pole; light gray



### Item no.734-134/105-604

THR male header; 1.0 x 1.0 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 4-pole; black



### Item no.734-134/105-604/997-405

THR male header; 1.0 x 1.0 mm solder pin; straight; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 4-pole; black



### Item no.734-164

THT male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 4-pole; light gray



### Item no.734-164/105-604

THR male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 4-pole; black



### Item no.734-304

1-conductor male connector; 100% protected against mismatching; 1.5 mm²; Pin spacing 3.5 mm; 4-pole; 1,50 mm²; light gray



### Item no.734-164/105-604/997-405

THR male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 4-pole; black



### Item no.734-304/019-000

1-conductor male connector; 100% protected against mismatching; clamping collar; 1.5 mm²; Pin spacing 3.5 mm; 4-pole; 1,50 mm²; light gray



### Item no.734-304/018-000

1-conductor male connector; 100% protected against mismatching; Snap-in mounting feet; 1.5 mm²; Pin spacing 3.5 mm; 4-pole; 1,50 mm²; light gray

### Item no.734-364

Subject to change



2-conductor combi strip; 100% protected against mismating; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 4-pole; 1,50 mm<sup>2</sup>; light gray



**Item no.734-364/008-000**

2-conductor combi strip; 100% protected against mismating; Snap-in mounting feet; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 4-pole; 1,50 mm<sup>2</sup>; light gray



**Item no.734-364/037-000**

2-conductor combi strip; 100% protected against mismating; Locking lever; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 4-pole; 1,50 mm<sup>2</sup>; light gray



**Item no.734-404**

THT double-deck male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismating; Pin spacing 3.5 mm; 8-pole; light gray



**Item no.734-404/001-000**

THT double-deck male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismating; Pin spacing 3.5 mm; 8-pole; light gray

## Compatible products

### tools



**Item no.: 210-250**

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



**Item no.: 210-251**

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



**Item no.: 210-647**

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



**Item no.: 210-719**

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



**Item no.: 734-190**

Combination operating tool; natural



**Item no.: 734-191**

Operating tool; loose; black



**Item no.: 734-230**

Push-button



**Item no.: 734-231**

Operating tool; black

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

## ferrule

|                                                                                    |                                                                                                                                                                                        |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Item no.: 216-101</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated                                                                          |
|    | <b>Item no.: 216-102</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated                                                                         |
|    | <b>Item no.: 216-103</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated                                                                            |
|    | <b>Item no.: 216-104</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated                                                                          |
|    | <b>Item no.: 216-121</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated                                                                          |
|    | <b>Item no.: 216-122</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated                                                                         |
|    | <b>Item no.: 216-123</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated                                                                            |
|    | <b>Item no.: 216-124</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated                                                                          |
|    | <b>Item no.: 216-131</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                         |
|  | <b>Item no.: 216-132</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                         |
|  | <b>Item no.: 216-141</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92  |
|  | <b>Item no.: 216-142</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 |
|  | <b>Item no.: 216-143</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92    |
|  | <b>Item no.: 216-144</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92  |
|  | <b>Item no.: 216-151</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                         |
|  | <b>Item no.: 216-152</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated                                                                         |
|  | <b>Item no.: 216-201</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white                                                                     |

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



|                                                                                   |                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Item no.: 216-202</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray                                                                         |
|    | <b>Item no.: 216-203</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red                                                                             |
|    | <b>Item no.: 216-204</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black                                                                         |
|    | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white                                                                         |
|    | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray                                                                         |
|    | <b>Item no.: 216-223</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red                                                                             |
|    | <b>Item no.: 216-224</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black                                                                         |
|    | <b>Item no.: 216-241</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white |
|    | <b>Item no.: 216-242</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray |
|   | <b>Item no.: 216-243</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red     |
|  | <b>Item no.: 216-244</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black |
|  | <b>Item no.: 216-262</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray |
|  | <b>Item no.: 216-263</b><br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red     |
|  | <b>Item no.: 216-264</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black |
|  | <b>Item no.: 216-284</b><br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black |
|                                                                                   | <b>Item no.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow                                                                       |
|  | <b>Item no.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green                                                                        |

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

**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; green

**check****Item no.: 735-500**

Test pin; 1 mm Ø; with solder connection for test wire

**Marking accessories****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

**Strain relief plate****Item no.: 734-127**

Strain relief plate; light gray

**Item no.: 734-604**

Strain relief housing; light gray

**Insulation stop****Item no.: 734-671**

Insulation stop; 0.08 - 0.2 mm<sup>2</sup> "s" (0.14 mm<sup>2</sup> "f-st"); 8 pieces/strip; light gray

**Downloads****Documentation****Additional Information**

Technical explanations

Apr 3, 2019

**CAD/CAE-Data****CAD data**

2D/3D Models 734-104

**CAE data**

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

## Installation Notes

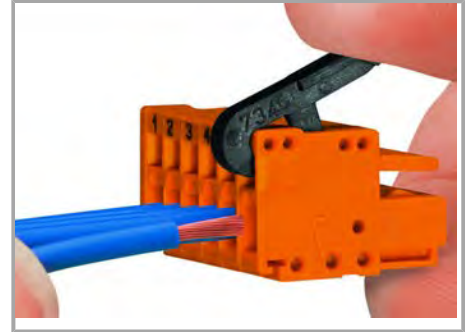
### Conductor termination



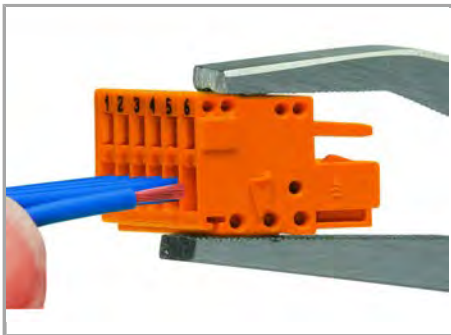
Inserting a conductor via (2.5 x 0.4) mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



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



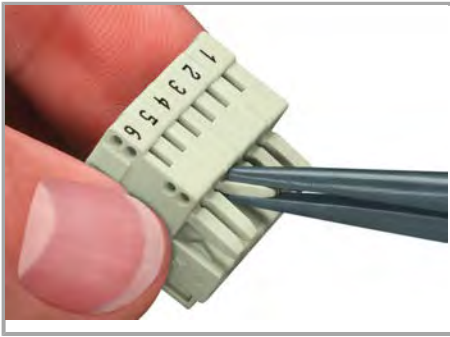
Inserting a conductor into CAGE CLAMP® unit via operating lever (734-191).



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

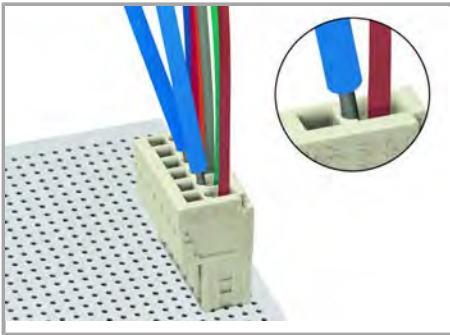
### Coding

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



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

## Testing



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

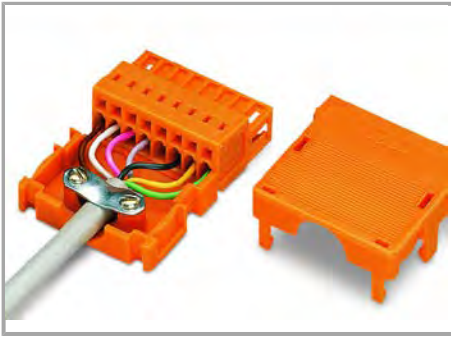
## Marking



Labeling via direct marking or self-adhesive strips.

## Installation

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



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

### Product family

<i>MCS</i> MINI

[Show all products from the family](#)

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