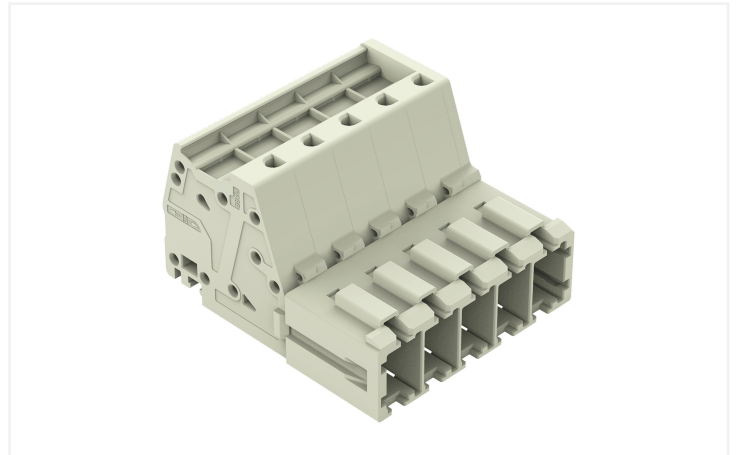
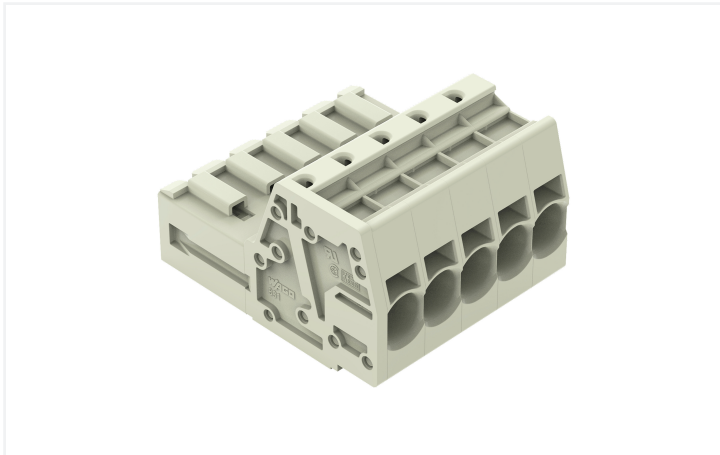


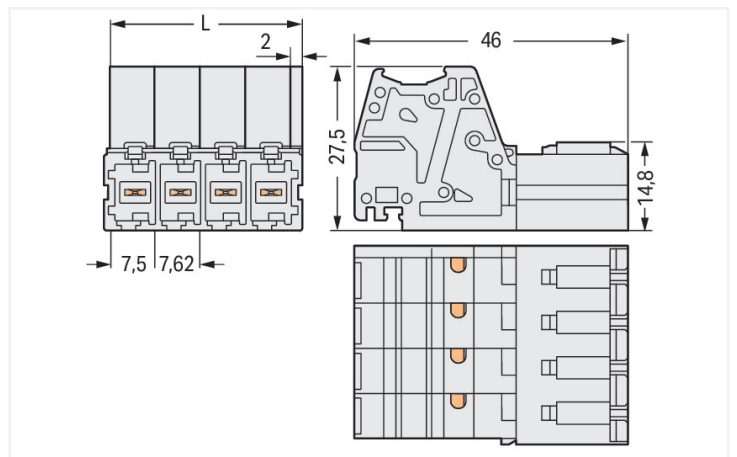
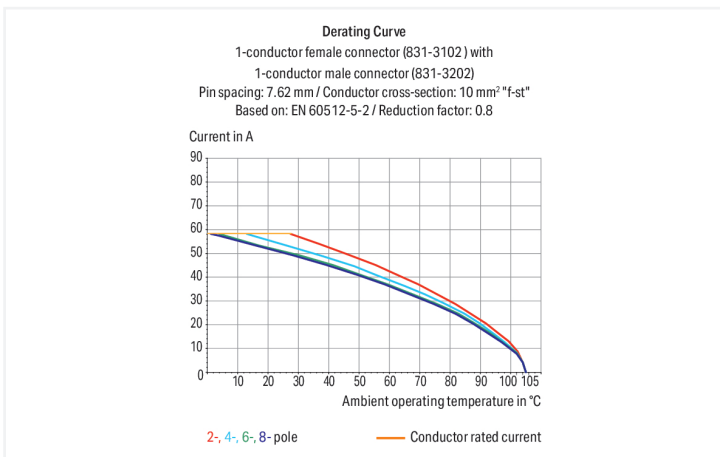
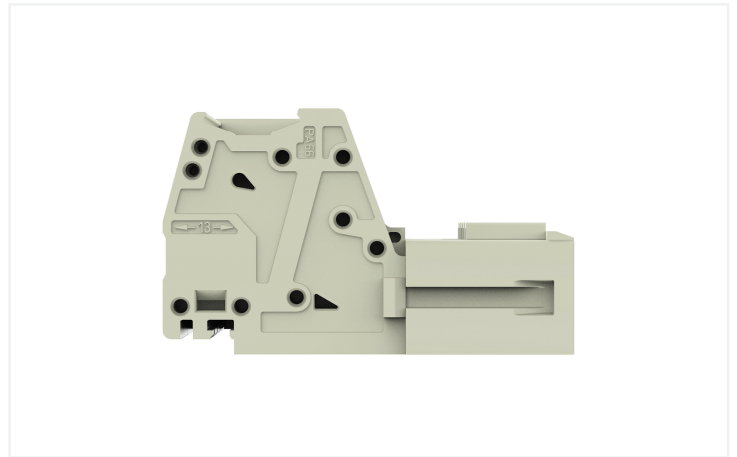
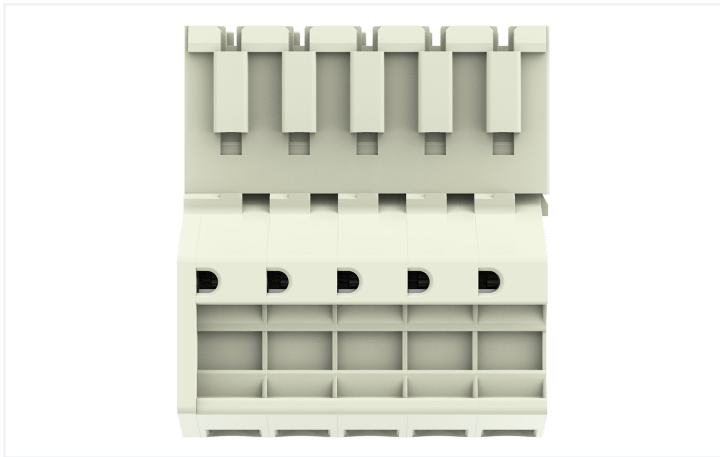
# Data Sheet | Item Number: 831-3205

1-conductor male connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; 10,00 mm²; light gray

<https://www.wago.com/831-3205>



Color: ■ light gray



## Male connector, 831 Series, operating tool

This male connector (item number 831-3205) simplifies electrical installations. Ensure that the strip lengths are between 13 and 15 mm when connecting conductors to this male connector. This product features one conductor terminal and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. Solid and fine-stranded conductors with ferrules can be plugged in without the need for

tools—all thanks to its pluggable design. Dimensions: (39.98 x 27.5 x 46) mm (width x height x depth). This male connector is suitable for conductor cross sections ranging from 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup>.

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  
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 |        |        |
|---------------------------------|----------------|--------|--------|
| Overvoltage category            | III            | III    | II     |
| Pollution degree                | 3              | 2      | 2      |
| Nominal voltage                 | 800 V          | 1000 V | 1000 V |
| Rated impulse withstand voltage | 8 kV           | 8 kV   | 8 kV   |
| Rated current                   | 41 A           | 41 A   | 41 A   |

| Approvals per | UL 1059 |       |   |
|---------------|---------|-------|---|
| Use group     | B       | C     | D |
| Rated voltage | -       | 600 V | - |
| Rated current | -       | 42 A  | - |

| Approvals per | CSA |       |   |
|---------------|-----|-------|---|
| Use group     | B   | C     | D |
| Rated voltage | -   | 600 V | - |
| Rated current | -   | 41 A  | - |

**Connection Data**

|                            |   |
|----------------------------|---|
| Clamping units             | 5 |
| Total number of potentials | 5 |
| Number of connection types | 1 |
| Number of levels           | 1 |

| Connection 1                                      |   |
|---|---|
| Connection technology                             | Push-in CAGE CLAMP®                       |
| Actuation type                                    | Operating tool                            |
| Actuation direction 1                             | Operation parallel to conductor entry     |
| Solid conductor                                   | 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG |
| Fine-stranded conductor                           | 0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG |
| Fine-stranded conductor; with insulated ferrule   | 0.5 ... 6 mm <sup>2</sup>                 |
| Fine-stranded conductor; with uninsulated ferrule | 0.5 ... 6 mm <sup>2</sup>                 |
| Strip length                                      | 13 ... 15 mm / 0.51 ... 0.59 inches       |
| Pole number                                       | 5   |
| Conductor entry direction to mating direction     | 0°  |

### Physical data

|             |                         |
|-------------|-------------------------|
| Pin spacing | 7.62 mm / 0.3 inches    |
| Width       | 39.98 mm / 1.574 inches |
| Height      | 27.5 mm / 1.083 inches  |
| Depth       | 46 mm / 1.811 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                 |

### Material data

|                                    |  |
|------------------------------------|--|
| Note (material data)               | <a href="#">Information on material specifications can be found here</a> |
| 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 <sub>Cu</sub> )                                   |
| Contact Plating                    | Tin  |
| Fire load                          | 0.547 MJ   |
| Weight                             | 33.2 g   |

### Environmental requirements

|                         |                 |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +105 °C |
| Processing temperature  | -35 ... +60 °C  |

### Environmental Testing

|   |  |
|---|--|
| Test specification:<br>Railway applications –<br>Rolling stock –<br>Electronic equipment            | DIN EN 50155 (VDE 0115-200):2022-06                |
| Test procedure:<br>Railway applications –<br>Rolling stock equipment –<br>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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz   |
| Acceleration  | 0.572g (highest test level used for all axes)      |
| Test duration per axis  | 5 h  |
| Test directions   | X, Y and Z axes                                    |

**Environmental Testing**

|   |   |
|---|---|
| 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)              | 24 pcs                 |
| Packaging type        | Box                    |
| Country of origin     | PL                     |
| GTIN                  | 4066966839265          |
| Customs tariff number | 85366930000            |

**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**

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

**Approvals / Certificates**

**General approvals**

**Declarations of conformity and manufacturer's declarations**



| Approval                              | Standard  | Certificate Name |
|---------------------------------------|-----------|------------------|
| CB<br>DEKRA Certification B.V.        | IEC 61984 | NL-61360/M1      |
| CSA<br>DEKRA Certification B.V.       | C22.2     | 1466354          |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984  | 71-116057        |
| UR<br>Underwriters Laboratories Inc.  | UL 1059   | UL-US-2426356-0  |

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

Approvals for marine applications



| Approval              | Standard  | Certificate Name |
|-----------------------|-----------|------------------|
| LR<br>Lloyds Register | IEC 61984 | 96/20035 (E5)    |

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 831-3205



Documentation

Additional Information

|                   |            |                   |  |
|-------------------|------------|-------------------|--|
| Technical Section | 03.04.2019 | pdf<br>2027.26 KB |  |
|-------------------|------------|-------------------|--|

CAD/CAE-Data

CAD data

2D/3D Models  
831-3205



CAE data

EPLAN Data Portal  
831-3205



ZUKEN Portal  
831-3205



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



**Item No.: 831-3105**

1-conductor female connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; 10,00 mm²; light gray



**Item No.: 831-3105/000-9035**

1-conductor female connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; direct marking; 10,00 mm²; light gray



**Item No.: 831-3105/000-9037**

1-conductor female connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; direct marking; 10,00 mm²; light gray



**Item No.: 831-3105/135-000**

1-conductor female connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; Gripping plate; 10,00 mm²; light gray



**Item No.: 831-3105/037-000**

1-conductor female connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; Lateral locking levers; 10,00 mm²; light gray



**Item No.: 831-3105/037-9037**

1-conductor female connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; Lateral locking levers; direct marking; 10,00 mm²; light gray



**Item No.: 831-3525**

THT female header; angled; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; 1.0 x 1.2 mm solder pin; light gray



**Item No.: 831-3505**

THT female header; straight; Pin spacing 7.62 mm; 5-pole; 100% protected against mismatching; 1.0 x 1.2 mm solder pin; light gray

## 1.2 Optional Accessories

### 1.2.1 Coding

#### 1.2.1.1 Coding



**Item No.: 831-500**

Coding pin carrier with six coding pins; orange

### 1.2.2 Installation

#### 1.2.2.1 Snap-in frame



**Item No.: 831-305**

Snap-in frame; for male connectors; 1 part; Pin spacing 7.62 mm; 5-pole; light gray

### 1.2.3 Marking

#### 1.2.3.1 Marker

**Item No.: 2009-145/000-006**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

**Item No.: 2009-145/000-007**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

**Item No.: 2009-145/000-023**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

**Item No.: 2009-145/000-012**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

**Item No.: 2009-145/000-005**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

**Item No.: 2009-145/000-024**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

**Item No.: 2009-145**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

**Item No.: 2009-145/000-002**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



**Item No.: 248-501/000-006**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

**Item No.: 248-501/000-007**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

**Item No.: 248-501/000-023**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

**Item No.: 248-501/000-017**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



**Item No.: 248-501/000-012**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

**Item No.: 248-501/000-005**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

**Item No.: 248-501**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

**Item No.: 248-501/000-002**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow



**Item No.: 793-5501/000-006**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue

**Item No.: 793-5501/000-007**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray

**Item No.: 793-5501/000-023**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green

**Item No.: 793-5501/000-017**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green



**Item No.: 793-5501/000-012**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange

**Item No.: 793-5501/000-005**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red

**Item No.: 793-5501/000-024**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

**Item No.: 793-5501**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white



1.2.3.1 Marker



**Item No.: 793-5501/000-002**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



**Item No.: 793-501/000-006**  
WMB marking card; as card; not stretchable; plain; snap-on type; blue



**Item No.: 793-501/000-007**  
WMB marking card; as card; not stretchable; plain; snap-on type; gray



**Item No.: 793-501/000-023**  
WMB marking card; as card; not stretchable; plain; snap-on type; green



**Item No.: 793-501/000-017**  
WMB marking card; as card; not stretchable; plain; snap-on type; light green



**Item No.: 793-501/000-012**  
WMB marking card; as card; not stretchable; plain; snap-on type; orange



**Item No.: 793-501/000-005**  
WMB marking card; as card; not stretchable; plain; snap-on type; red



**Item No.: 793-501/000-024**  
WMB marking card; as card; not stretchable; plain; snap-on type; violet



**Item No.: 793-501**  
WMB marking card; as card; not stretchable; plain; snap-on type; white



**Item No.: 793-501/000-002**  
WMB marking card; as card; not stretchable; plain; snap-on type; yellow



**Item No.: 2009-115/000-006**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



**Item No.: 2009-115/000-007**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray



**Item No.: 2009-115/000-023**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green



**Item No.: 2009-115/000-017**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green



**Item No.: 2009-115/000-012**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



**Item No.: 2009-115/000-024**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



**Item No.: 2009-115**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



**Item No.: 2009-115/000-002**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

1.2.3.2 Marking strip



**Item No.: 2009-110/762-852**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110/762-853**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110/762-854**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110/762-855**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110/762-856**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110/762-857**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110/762-858**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110/762-859**  
Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



**Item No.: 2009-110**  
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.2.4 Mounting adapter

1.2.4.1 Mounting accessories



**Item No.: 831-137**  
Mounting adapter; for DIN-35 rail/panel mounting; 3 parts; Pin spacing 7.62 mm; light gray

## 1.2.5 Strain relief

### 1.2.5.1 Strain relief plate



**Item No.: 831-505**

Strain relief plate; for female and male connectors; 30 mm wide; 1 part; Pin spacing 7.62 mm; light gray

## 1.2.6 Test and measurement

### 1.2.6.1 Testing accessories



**Item No.: 210-136**

Test plug; 2 mm Ø; with 500 mm cable; red

## 1.2.7 Tool

### 1.2.7.1 Operating tool

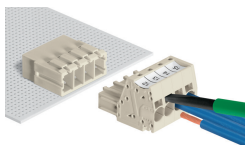


**Item No.: 210-721**

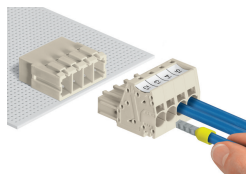
Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

## Installation Notes

### Conductor termination

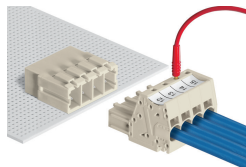


Inserting fine-stranded conductors via (5.5 x 0.8) mm screwdriver.



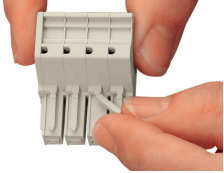
Solid and ferruled conductors are terminated by simply pushing them into unit.

## Testing

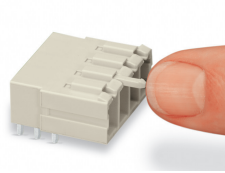


Testing with 2 mm Ø test plug.

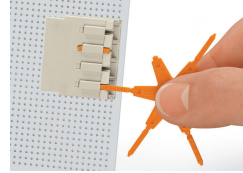
Coding



Break or cut off coding pin from female connector.



Insert coding pin into male header (break first) until it engages.



Coding a THT male header by inserting a coding pin.

Marking



Direct marking of female and male connectors



MCS MAXI male and female connectors can also be marked via Mini-WSB or WMB markers.