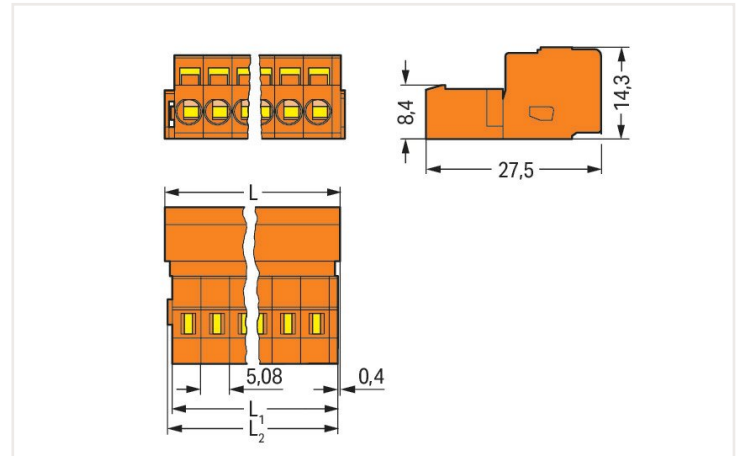
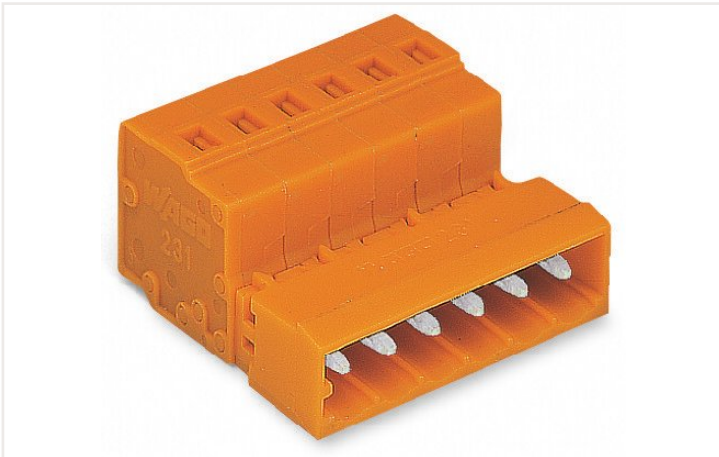


**Data sheet | Item number: 231-633**

1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 3-pole; 2,50 mm<sup>2</sup>; orange

<https://www.wago.com/231-633>



Dimensions in mm

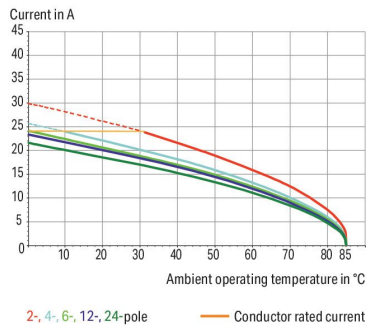
$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$

$L1 = L - 1.7 \text{ mm}$

$L2 = L - 1.2 \text{ mm}$

**Derating Curve**

1-conductor female connector (231-102/026-000) with  
1-conductor male header (231-602)  
Pin spacing: 5 mm / Conductor cross-section: 2.5 mm<sup>2</sup> "F-st"  
Based on: EN 60512-5-2 / Reduction factor: 0.8



- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- For wire-to-wire and board-to-wire connections
- Versions available with snap-in mounting feet or flanges for panel or through-panel mounting
- With coding fingers

## 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)	320 V
Rated impulse voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated impulse voltage (III/2)	4 kV
Nominal voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
Rated current	12 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

### Ratings per UL

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	15 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	10 A

### Ratings per UL

Rated voltage (UL 1977)	600 V
Rated current UL 1977	15 A

### Ratings per CSA

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	15 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

## Connection data

Connection points	3
Total number of potentials	3
Number of connection types	1
Number of levels	1

### Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup>
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Pole number	3
Conductor entry direction to mating direction	0°

### Physical data

Pin spacing	5.08 mm / 0.2 inches
Width	18.44 mm / 0.726 inches
Height	14.3 mm / 0.563 inches
Depth	27.5 mm / 1.083 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	No

### Material data

Note (material data)	<a href="#">Information on material data can be found here</a>
Color	orange
Material group	I
Insulation material	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	0.085 MJ
Weight	4.9 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)	100 Stück
Packaging type	Box
Country of origin VKOrg Germany	DE
GTIN	4044918259668
Customs tariff number VKOrg Germany	85366990990

## Approvals and certificates

### General approvals



Approval	Standard	Certificate name
CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1
CSA DEKRA Certification B.V.	C22.2	1466354
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-121453
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 231-633



## Documentation

### Additional Information

Technical Section  
03.04.2019 pdf  
1949.09 KB



CAD/CAE-Data

<b>CAD data</b>	<b>CAE data</b>
2D/3D Models 231-633	EPLAN Data Portal 231-633
	ZUKEN Portal 231-633

1 Compatible products

1.1 System counterpart

1.1.1 Female connector/socket

 <b>Item no.: 232-303/026-000</b> 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 232-403/026-000</b> 1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 231-303/026-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 231-303/031-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; clamping collar; 2,50 mm <sup>2</sup> ; orange
 <b>Item no.: 231-303/037-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; Lateral locking levers; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 231-303/008-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; Snap-in mounting feet; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 231-303/102-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; with integrated end plate; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 2231-303/026-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; 2,50 mm <sup>2</sup> ; orange
 <b>Item no.: 2231-303/031-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; clamping collar; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 2231-303/037-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; Lateral locking levers; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 2231-303/008-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; Snap-in mounting feet; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 2231-303/102-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; with integrated end plate; 2,50 mm <sup>2</sup> ; orange
 <b>Item no.: 231-2303/037-000</b> 2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; Lateral locking levers; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 231-2303/026-000</b> 2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 3-pole; with integrated end plate; 2,50 mm <sup>2</sup> ; orange	 <b>Item no.: 232-263</b> THT female header; angled; Pin spacing 5.08 mm; 3-pole; 0.6 x 1.0 mm solder pin; orange	 <b>Item no.: 232-263/031-000</b> THT female header; angled; Pin spacing 5.08 mm; 3-pole; clamping collar; 0.6 x 1.0 mm solder pin; orange
 <b>Item no.: 232-263/039-000</b> THT female header; angled; Pin spacing 5.08 mm; 3-pole; Locking lever; 0.6 x 1.0 mm solder pin; orange	 <b>Item no.: 232-263/047-000</b> THT female header; angled; Pin spacing 5.08 mm; 3-pole; Spacer flange; 0.6 x 1.0 mm solder pin; orange	 <b>Item no.: 232-163</b> THT female header; straight; Pin spacing 5.08 mm; 3-pole; 0.6 x 1.0 mm solder pin; orange	 <b>Item no.: 232-163/031-000</b> THT female header; straight; Pin spacing 5.08 mm; 3-pole; clamping collar; 0.6 x 1.0 mm solder pin; orange
 <b>Item no.: 232-163/039-000</b> THT female header; straight; Pin spacing 5.08 mm; 3-pole; Locking lever; 0.6 x 1.0 mm solder pin; orange	 <b>Item no.: 232-163/047-000</b> THT female header; straight; Pin spacing 5.08 mm; 3-pole; Spacer flange; 0.6 x 1.0 mm solder pin; orange		

## 1.2 Optional accessories

### 1.2.1 Coding

#### 1.2.1.1 Coding



**Item no.: 231-129**

Coding key; snap-on type; light gray

### 1.2.2 Cover

#### 1.2.2.1 Cover



**Item no.: 231-669**

Lockout caps; for covering unused clamping units; orange

### 1.2.3 Ferrule

#### 1.2.3.1 Ferrule



**Item no.: 216-301**

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



**Item no.: 216-321**

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



**Item no.: 216-151**

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



**Item no.: 216-131**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored



**Item no.: 216-302**

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



**Item no.: 216-322**

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



**Item no.: 216-132**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated



**Item no.: 216-152**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated



**Item no.: 216-241**

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



**Item no.: 216-201**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white



**Item no.: 216-221**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white



**Item no.: 216-141**

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



**Item no.: 216-101**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored



**Item no.: 216-121**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored



**Item no.: 216-242**

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



**Item no.: 216-262**

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



**Item no.: 216-202**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray



**Item no.: 216-222**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray



**Item no.: 216-142**

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



**Item no.: 216-102**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored



**Item no.: 216-122**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored



**Item no.: 216-243**

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



**Item no.: 216-263**

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



**Item no.: 216-203**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

### 1.2.3.1 Ferrule



**Item no.: 216-223**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

**Item no.: 216-103**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated

**Item no.: 216-143**

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

**Item no.: 216-123**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored



**Item no.: 216-204**

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

**Item no.: 216-224**

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

**Item no.: 216-244**

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

**Item no.: 216-264**

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

### 1.2.4 Insulation stop

#### 1.2.4.1 Insulation stop



**Item no.: 231-670**

Insulation stop; 0.08-0.2 mm<sup>2</sup> / 0.2 mm<sup>2</sup> "s"; white

**Item no.: 231-671**

Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; light gray

**Item no.: 231-672**

Insulation stop; 0.75 - 1 mm<sup>2</sup>; dark gray

### 1.2.5 Jumper

#### 1.2.5.1 Jumper



**Item no.: 231-910**

Jumper; for conductor entry; 10-way; insulated; gray

**Item no.: 231-902**

Jumper; for conductor entry; 2-way; insulated; gray

**Item no.: 231-903**

Jumper; for conductor entry; 3-way; insulated; gray

**Item no.: 231-905**

Jumper; for conductor entry; 5-way; insulated; gray



**Item no.: 231-907**

Jumper; for conductor entry; 7-way; insulated; gray

### 1.2.6 Marking

#### 1.2.6.1 Marking strip



**Item no.: 210-331/508-103**

Marking strips; as a DIN A4 sheet; MARKED; 1-12 (200x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item no.: 210-332/508-202**

Marking strips; as a DIN A4 sheet; MARKED; 1-16 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item no.: 210-332/508-205**

Marking strips; as a DIN A4 sheet; MARKED; 1-32 (80x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item no.: 210-331/508-104**

Marking strips; as a DIN A4 sheet; MARKED; 13-24 (200x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



**Item no.: 210-332/508-204**

Marking strips; as a DIN A4 sheet; MARKED; 17-32 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item no.: 210-332/508-206**

Marking strips; as a DIN A4 sheet; MARKED; 33-48 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

## 1.2.7 Strain relief

### 1.2.7.1 Strain relief housing



**Item no.: 232-633**

Strain relief housing; orange

## 1.2.8 Tool

### 1.2.8.1 Operating tool



**Item no.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



**Item no.: 210-657**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured



**Item no.: 209-132**

Operating tool; for connecting comb-style jumper bar; made of insulating material; 2-way; natural



**Item no.: 280-440**

Operating tool; made of insulating material; 10-way



**Item no.: 209-130**

Operating tool; made of insulating material; 1-way; for 264 Series (1-/2-way), 280, 281 Series (up to 3-way); natural



**Item no.: 231-291**

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



**Item no.: 231-131**

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



**Item no.: 280-432**

Operating tool; made of insulating material; 2-way; white



**Item no.: 280-433**

Operating tool; made of insulating material; 3-way



**Item no.: 280-434**

Operating tool; made of insulating material; 4-way



**Item no.: 280-435**

Operating tool; made of insulating material; 5-way; gray



**Item no.: 280-436**

Operating tool; made of insulating material; 6-way



**Item no.: 280-437**

Operating tool; made of insulating material; 7-way

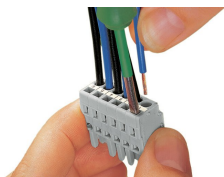


**Item no.: 280-438**

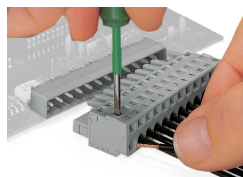
Operating tool; made of insulating material; 8-way

## Installation notes

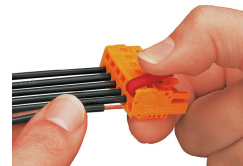
### Conductor termination



Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.



Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.

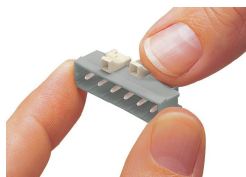


Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).



Inserting a conductor via operating tool.

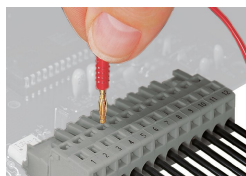
## Coding



Coding a male header – fitting coding key(s).

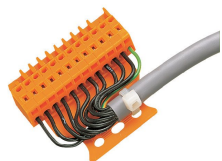


## Testing



Testing – female connector with CAGE CLAMP®  
Integrated test ports for testing perpendicular to conductor entry via 2 or 2.3 mm Ø test plug

## Installation

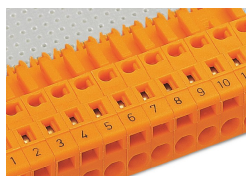


Male connector with strain relief plate



Strain relief housing shown with a male connector equipped with CAGE CLAMP®

## Marking



Labeling via direct marking or self-adhesive strips.