

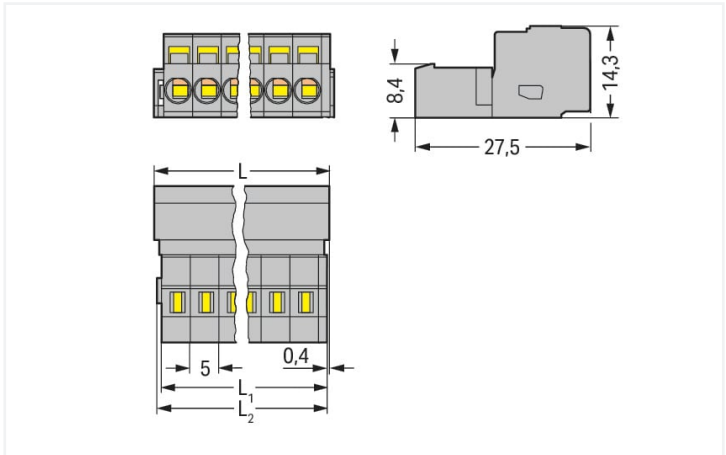
Data Sheet | Item Number: 231-615

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole;  
2,50 mm²; gray

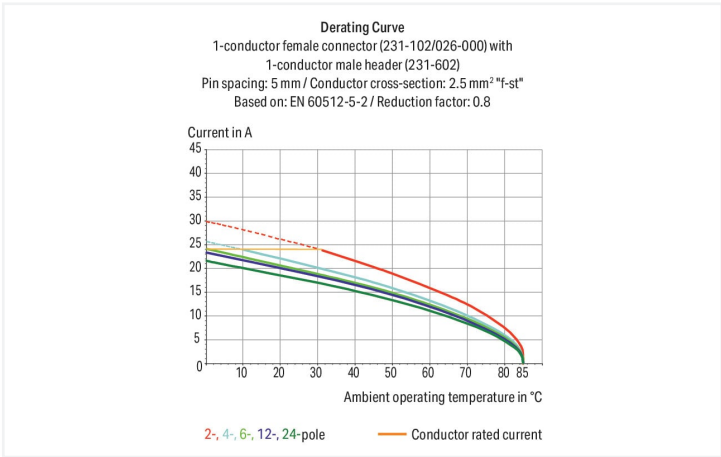
<https://www.wago.com/231-615>



Color: gray



Dimensions in mm  
 $L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$   
 $L1 = L - 1.7 \text{ mm}$   
 $L2 = L - 1.2 \text{ mm}$



- 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 <a href="https://configurator.wago.com/">https://configurator.wago.com/</a> .

## 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) $\triangleq$ Overvoltage category III / Pollution degree 2

### Ratings per UL 1059

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 1977

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	15
Total number of potentials	15
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 mm² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm² / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm²
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Pole number	15
Conductor entry direction to mating direction	0°

## Physical data

Pin spacing	5 mm / 0.197 inches
Width	78.2 mm / 3.079 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 specifications can be found here</a>
Color		gray
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		0.395 MJ
Weight		22.5 g

Environmental requirements		
Limit temperature range		-60 ... +100 °C
Processing temperature		-35 ... +60 °C




Commercial data		
PU (SPU)		25 pcs
Packaging type		Box
Country of origin		DE
GTIN		4044918258661
Customs tariff number		85366990990

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
  					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1	Railway WAGO GmbH & Co. KG	-	Railway Ready
CSA DEKRA Certification B.V.	C22.2	LR 18677-25			
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-121453			
UR Underwriters Laboratories Inc.	UL 1977	E45171			



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 231-615

Documentation

Additional Information
Technical Section
03.04.2019
pdf 1949.09 KB






CAD/CAE-Data

CAD data	CAE data
2D/3D Models 231-615	EPLAN Data Portal 231-615
	ZUKEN Portal 231-615

1 Compatible Products
























1.1 System counterpart

1.1.1 Female connector/socket

 <b>Item No.: 232-115/026-000</b> 1-conductor female connector, angled; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15-pole; 2,50 mm²; gray	 <b>Item No.: 232-215/026-000</b> 1-conductor female connector, angled; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15-pole; 2,50 mm²; gray	 <b>Item No.: 731-515/031-000</b> 1-conductor female connector, angled; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15-pole; clamping collar; DIN-35 rail/ panel mounting; 2,50 mm²; gray	 <b>Item No.: 731-515/008-000</b> 1-conductor female connector, angled; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15-pole; Snap-in mounting feet; 2,50 mm²; gray
 <b>Item No.: 231-115/026-000</b> 1-conductor female connector; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15- pole; 2,50 mm²; gray	 <b>Item No.: 231-115/027-000</b> 1-conductor female connector; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15- pole; clamping collar; 2,50 mm²; gray	 <b>Item No.: 231-115/031-000</b> 1-conductor female connector; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15- pole; clamping collar; 2,50 mm²; gray	 <b>Item No.: 231-115/026-000/054-000</b> 1-conductor female connector; CAGE CLAMP®; 2,5 mm²; Pin spacing 5 mm; 15- pole; direct marking; 2,50 mm²; gray




1.1.1 Female connector/socket

 <b>Item No.: 231-115/037-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; Lateral locking levers; 2,50 mm²; gray	 <b>Item No.: 231-115/125-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; Snap-in flange; 2,50 mm²; gray	 <b>Item No.: 231-115/008-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; Snap-in mounting feet; 2,50 mm²; gray	 <b>Item No.: 231-115/102-000</b> 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; with integrated end plate; 2,50 mm²; gray
 <b>Item No.: 2231-115/026-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; 2,50 mm²; gray	 <b>Item No.: 2231-115/031-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; clamping collar; 2,50 mm²; gray	 <b>Item No.: 2231-115/037-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; Lateral locking levers; 2,50 mm²; gray	 <b>Item No.: 2231-115/008-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; Snap-in mounting feet; 2,50 mm²; gray
 <b>Item No.: 2231-115/102-000</b> 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; with integrated end plate; 2,50 mm²; gray	 <b>Item No.: 231-2115/037-000</b> 2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; Lateral locking levers; 2,50 mm²; gray	 <b>Item No.: 231-2115/026-000</b> 2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 15-pole; with integrated end plate; 2,50 mm²; gray	 <b>Item No.: 232-245/005-000/039-000</b> Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; angled; Locking lever; Pin spacing 5 mm; 15-pole; gray
 <b>Item No.: 232-245/005-000</b> Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; angled; Pin spacing 5 mm; 15-pole; gray	 <b>Item No.: 232-145/005-000/039-000</b> Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; straight; Locking lever; Pin spacing 5 mm; 15-pole; gray	 <b>Item No.: 232-145/005-000</b> Female connector for rail-mount terminal blocks; 0.6 x 1 mm pins; straight; Pin spacing 5 mm; 15-pole; gray	 <b>Item No.: 232-245</b> THT female header; angled; Pin spacing 5 mm; 15-pole; 0.6 x 1.0 mm solder pin; gray
 <b>Item No.: 232-245/031-000</b> THT female header; angled; Pin spacing 5 mm; 15-pole; clamping collar; 0.6 x 1.0 mm solder pin; gray	 <b>Item No.: 232-245/039-000</b> THT female header; angled; Pin spacing 5 mm; 15-pole; Locking lever; 0.6 x 1.0 mm solder pin; gray	 <b>Item No.: 232-245/047-000</b> THT female header; angled; Pin spacing 5 mm; 15-pole; Spacer flange; 0.6 x 1.0 mm solder pin; gray	 <b>Item No.: 232-145</b> THT female header; straight; Pin spacing 5 mm; 15-pole; 0.6 x 1.0 mm solder pin; gray
 <b>Item No.: 232-145/031-000</b> THT female header; straight; Pin spacing 5 mm; 15-pole; clamping collar; 0.6 x 1.0 mm solder pin; gray	 <b>Item No.: 232-145/039-000</b> THT female header; straight; Pin spacing 5 mm; 15-pole; Locking lever; 0.6 x 1.0 mm solder pin; gray	 <b>Item No.: 232-145/047-000</b> THT female header; straight; Pin spacing 5 mm; 15-pole; Spacer flange; 0.6 x 1.0 mm solder pin; gray	

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding

 <b>Item No.: 231-129</b> Coding key; snap-on type; light gray
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1.2.2 Cover



1.2.2.1 Cover



**Item No.: 231-668**  
Lockout caps; for covering unused clamping units; gray

1.2.3 Ferrule

1.2.3.1 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



**Item No.: 216-241**  
Ferrule; Sleeve for 0.5 mm² / 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 mm² / 20 AWG; insulated; electro-tin plated; white



**Item No.: 216-221**  
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



**Item No.: 216-141**  
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



**Item No.: 216-101**  
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-121**  
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-242**  
Ferrule; Sleeve for 0.75 mm² / 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 mm² / 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 mm² / 18 AWG; insulated; electro-tin plated; gray



**Item No.: 216-222**  
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



**Item No.: 216-142**  
Ferrule; Sleeve for 0.75 mm² / 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 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-122**  
Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-243**  
Ferrule; Sleeve for 1 mm² / 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 mm² / 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 mm² / AWG 18; insulated; electro-tin plated; red



**Item No.: 216-223**  
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



**Item No.: 216-103**  
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated



**Item No.: 216-143**  
Ferrule; Sleeve for 1 mm² / 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 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-204**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



**Item No.: 216-224**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



**Item No.: 216-244**  
Ferrule; Sleeve for 1.5 mm² / 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 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

## 1.2.3.1 Ferrule

**Item No.: 216-284**

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.: 216-124**

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

**Item No.: 216-144**

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored

**Item No.: 216-104**

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

**Item No.: 216-106**

Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; un-insulated; electro-tin plated; silver-colored

## 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.: 210-331/500-103**

Marking strips; as a DIN A4 sheet; MARKED; 1-12 (300x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-332/500-202**

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.: 210-332/500-205**

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.: 210-331/500-104**

Marking strips; as a DIN A4 sheet; MARKED; 13-24 (300x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-332/500-204**


















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.: 210-332/500-206**

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

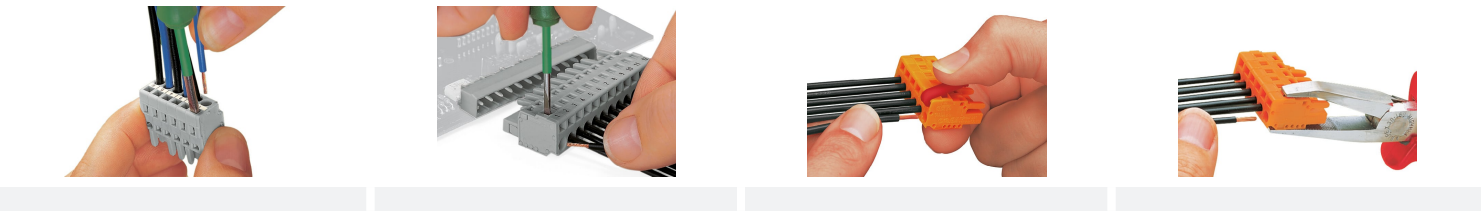
## 1.2.7 Tool

1.2.7.1 Operating tool

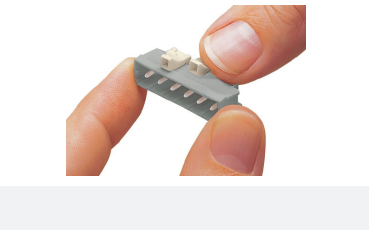
 <b>Item No.: 231-231</b> Combination operating tool; red	 <b>Item No.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	 <b>Item No.: 210-657</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	 <b>Item No.: 209-132</b> Operating tool; for connecting comb-style jumper bar; made of insulating material; 2-way; natural
 <b>Item No.: 210-250</b> Operating tool; for MCS MINI and MIDI with CAGE CLAMP® connection; red	 <b>Item No.: 280-440</b> Operating tool; made of insulating material; 10-way	 <b>Item No.: 209-130</b> Operating tool; made of insulating material; 1-way; for 264 Series (1-/2-way), 280, 281 Series (up to 3-way); natural	 <b>Item No.: 231-291</b> Operating tool; made of insulating material; 1-way; loose; red
 <b>Item No.: 231-131</b> Operating tool; made of insulating material; 1-way; loose; white	 <b>Item No.: 280-432</b> Operating tool; made of insulating material; 2-way; white	 <b>Item No.: 280-433</b> Operating tool; made of insulating material; 3-way	 <b>Item No.: 280-434</b> Operating tool; made of insulating material; 4-way
 <b>Item No.: 280-435</b> Operating tool; made of insulating material; 5-way; gray	 <b>Item No.: 280-436</b> Operating tool; made of insulating material; 6-way	 <b>Item No.: 280-437</b> Operating tool; made of insulating material; 7-way	 <b>Item No.: 280-438</b> Operating tool; made of insulating material; 8-way
 <b>Item No.: 231-159</b> Operating tool; natural			

Installation Notes

Conductor termination

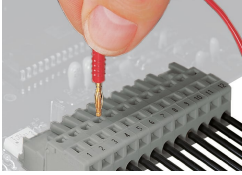


Coding

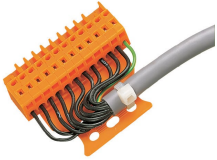




## Testing



## Installation



## Marking

