

Data sheet | Item number: 231-647/018-000

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm;
17-pole; DIN-35 rail/panel mounting; Snap-in mounting feet; 2,50 mm²;
orange



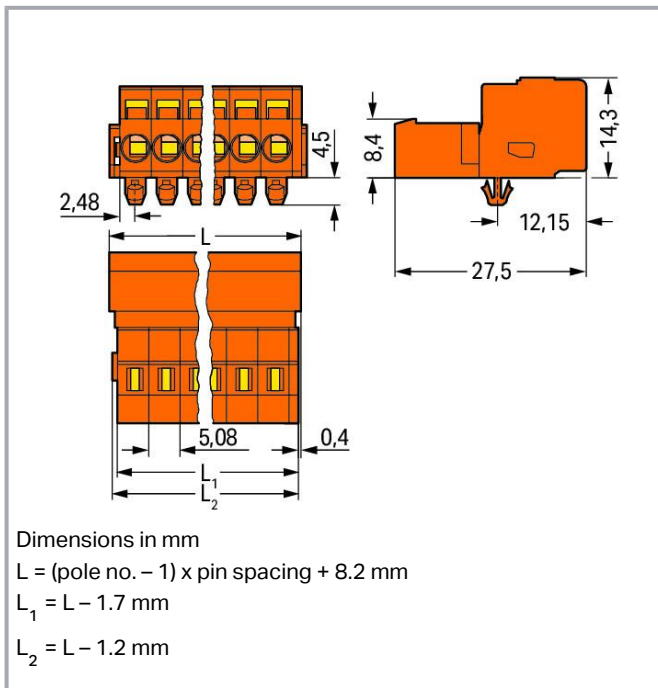
www.wago.com/231-647/018-000



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

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Item description

- 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

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/>.

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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 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	17
Total number of potentials	17
Number of connection types	1
Number of levels	1

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

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 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm ²
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Pole number	17
Conductor entry direction to mating direction	0°

Physical data

Pin spacing	5.08 mm / 0.2 inches
Width	89.56 mm / 3.526 inches
Height	18.8 mm / 0.74 inches
Height from the surface	14.3 mm / 0.563 inches
Depth	27.5 mm / 1.083 inches

Mechanical Data

Variable coding	Yes
Housing sheet thickness	0.6 ... 1.2 mm / 0.024 ... 0.047 inches
Mounting type	Snap-in foot
Mounting type	Panel mounting
Anti-rotation protection	Yes

Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for conductor
Mismating protection	No
Plugging without loss of pin spacing	No
Locking of plug-in connection	none

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



Material data

Note (material data)

Information on material specifications can be found here

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 _{Cu})
Contact plating	Tin
Fire load	0.463 MJ
Weight	26.1 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
ECCN	NO DATA
PU (SPU)	25 pcs
Packaging type	box
Country of origin	DE
GTIN	4044918261074
Customs tariff number	85366930000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Subject to changes. Please also observe the further product documentation!

Approvals / Certificates


General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1
	CCC CQC	GB/T 13140.1	CQC03003003013
	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

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
	BV	IEC 60998	11915/D0

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Bureau Veritas S.A.

BV



DNV
DNV GL SE

TAE000016Z

Counterpart



Item no.231-317/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 17-pole; 2,50 mm²; orange

www.wago.com/231-317/026-000

Optional accessories

Cover

Cover











Item no.: 231-669

Lockout caps; for covering unused clamping units; orange

www.wago.com/231-669

Ferrule

Ferrule

	Item no.: 216-101 Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-101
	Item no.: 216-104 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-104
	Item no.: 216-106 Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-106
	Item no.: 216-102 Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-102
	Item no.: 216-103 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated	www.wago.com/216-103
	Item no.: 216-123 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-123
	Item no.: 216-122 Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-122
	Item no.: 216-124 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated	www.wago.com/216-124

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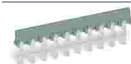
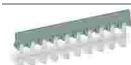
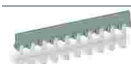




	Item no.: 216-142 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-142
	Item no.: 216-132 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-132
	Item no.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-121
	Item no.: 216-143 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-143
	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.: 216-141 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	www.wago.com/216-141
	Item no.: 216-152 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-152
	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
	Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
	Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-151
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
	Item no.: 216-144 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	www.wago.com/216-144
	Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-201
	Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-223
	Item no.: 216-241 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	www.wago.com/216-241
	Item no.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-242
	Item no.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-222

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

	Item no.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-221
	Item no.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-224
	Item no.: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-243
	Item no.: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	www.wago.com/216-244
	Item no.: 216-263 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-263
	Item no.: 216-264 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	www.wago.com/216-264
	Item no.: 216-262 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-262
	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

Jumpers

Jumper		
	Item no.: 231-905 Jumper; for conductor entry; 5-way; insulated; gray	www.wago.com/231-905
	Item no.: 231-903 Jumper; for conductor entry; 3-way; insulated; gray	www.wago.com/231-903
	Item no.: 231-907 Jumper; for conductor entry; 7-way; insulated; gray	www.wago.com/231-907
	Item no.: 231-910 Jumper; for conductor entry; 10-way; insulated; gray	www.wago.com/231-910
	Item no.: 231-902 Jumper; for conductor entry; 2-way; insulated; gray	www.wago.com/231-902

Coding

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

Coding

**Item no.:** 231-129

Coding key; snap-on type; light gray

www.wago.com/231-129

Insulation stop

Insulation stop

**Item no.:** 231-672Insulation stop; 0.75 - 1 mm²; dark graywww.wago.com/231-672**Item no.:** 231-670Insulation stop; 0.08-0.2 mm² / 0.2 mm² "s"; whitewww.wago.com/231-670**Item no.:** 231-671Insulation stop; 0.25 - 0.5 mm²; light graywww.wago.com/231-671

Marking accessories

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

www.wago.com/210-331/508-103**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

www.wago.com/210-331/508-104**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

www.wago.com/210-332/508-202**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

www.wago.com/210-332/508-204**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

www.wago.com/210-332/508-206**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

www.wago.com/210-332/508-205

Tool

Operating tool

**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

www.wago.com/209-130

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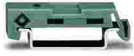
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	<p>Item no.: 209-132 Operating tool; for connecting comb-style jumper bar; made of insulating material; 2-way; natural</p>	www.wago.com/209-132
	<p>Item no.: 231-159 Operating tool; natural</p>	www.wago.com/231-159
	<p>Item no.: 210-250 Operating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

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

Mounting

Mounting accessories



Item no.: 209-137

Mounting adapter; can be used as end stop; 6.5 mm wide; gray

www.wago.com/209-137

Mounting adapter

Mounting accessories



Item no.: 209-148

Multi mounting adapter; for female and male connectors; 25 mm wide; 3 parts; gray

www.wago.com/209-148

Downloads

Documentation

Additional Information

Technical Section	2019 Apr 3	pdf	Download
Technical explanations		2.1 MB	

CAD/CAE-Data

CAD data

2D/3D Models 231-647/018-000	URL	Download
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CAE data

EPLAN Data Portal 231-647/018-000	URL	Download
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ZUKEN Portal 231-647/018-000	URL	Download
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EPLAN Data Portal 231-647/018-000	URL	Download
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Asset Administration Shell

Asset Administration Shell 231-647/018-000	URL	Download
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Environmental Product Compliance

Compliance Search

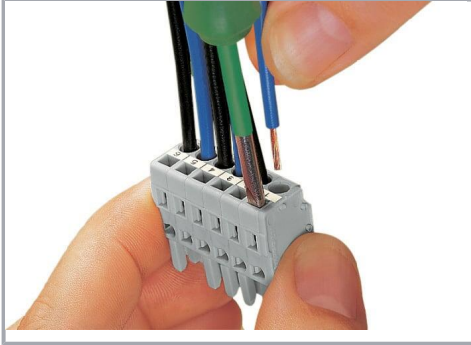
Environmental Product Compliance 231-647/018-000	URL	Download
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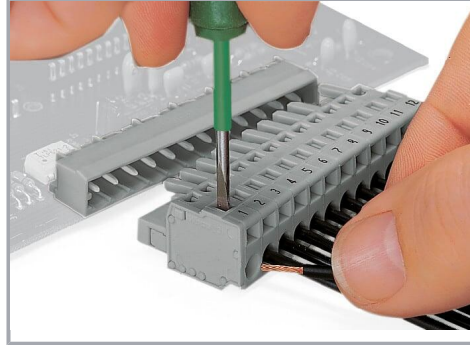
1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 17-pole;
DIN-35 rail/panel mounting; Snap-in mounting feet; 2,50 mm²; orange

Installation Notes

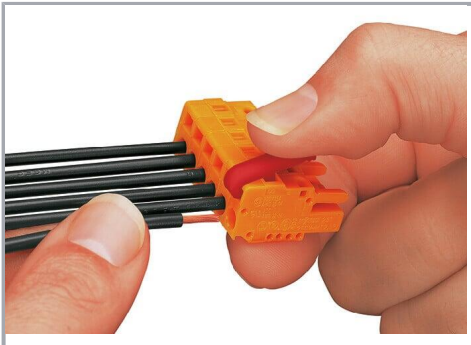
Conductor termination



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.



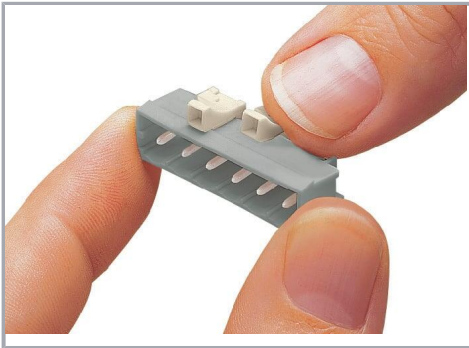
Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).



Inserting a conductor via operating tool.

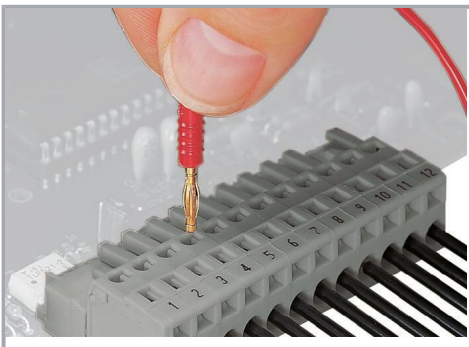
Coding

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

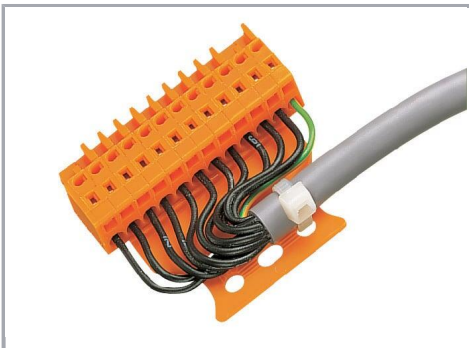
Testing



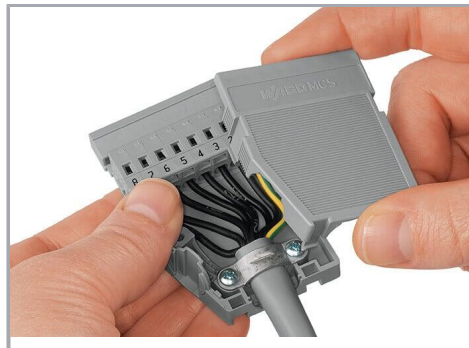
Testing – female connector with CAGE CLAMP®

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

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



Labeling via direct marking or self-adhesive strips.

Product family

MCS MIDI Classic

[Show all products from the family](#)

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