

Data sheet | Item number: 231-639

1-conductor male connector; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; 2,50 mm²; orange

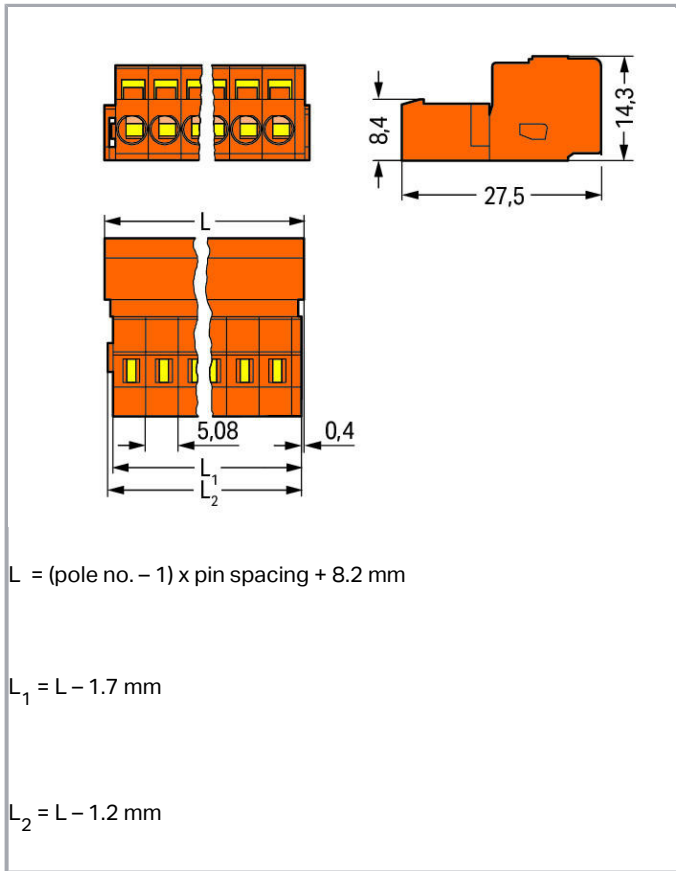
www.wago.com/231-639



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

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Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



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

Safety information 1:

The *MULTI CONNECTION SYSTEM (MCS)* is designed without breaking capacity for compliance with DIN EN 61984. When used as intended, MCS Connectors shall 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

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

Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60664-1
Rated 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
Rated voltage (II / 2)	630 V
Rated impulse voltage (II / 2)	4 kV
Rated current	12 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

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
Approvals per	UL 1059

Approvals per UL 1977

Rated voltage per UL 1977 (factory wiring only)	600 V
Rated current per UL 1977 (factory wiring only)	15 A

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 technology	CAGE CLAMP®
Actuation type	Operating tool
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 ferrule with plastic collar	0.25 ... 1.5 mm ²
Fine-stranded conductor with ferrule without plastic collar	0.25 ... 2.5 mm ²
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

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



No. of poles	9
Total number of connection points	9
Total number of potentials	9
Number of connection types	1
Number of levels	1
Conductor entry direction to mating direction	0°

Geometrical Data

Pin spacing	5.08 mm / 0.2 inch
Width	48.92 mm / 1.926 inch
Height	14.3 mm / 0.563 inch
Depth	27.5 mm / 1.083 inch

Plug connection

Contact type (pluggable connector)	Male connector/plug
Connector connection type	for conductors
Mismating protection	No

Material Data

Color	orange
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E _{Cu})
Contact plating	tin-plated
Fire load	0.231 MJ
Weight	14 g

Environmental Requirements

Limit temperature range	-60 ... +100 °C
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Commercial data



Product Group	3 (Multi Conn. System)
Packaging type	BOX
Country of origin	DE

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




GTIN	4044918260466
Customs Tariff No.	85366990990

Approvals / Certificates


Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-39756
	CSA DEKRA Certification B.V.	C22.2	1466354
	KEMA/KEUR DEKRA Certification B.V.	EN 61984	2190761.01

Ship Approvals

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













UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Germany GmbH	UL 1977	E45171
	UR Underwriters Laboratories Inc.	UL 1059	E45172

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



Counterpart

	Item no.2231-309/008-000 1-conductor female plug; push-button; Snap-in mounting feet; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/2231-309/008-000
	Item no.2231-309/026-000 1-conductor female plug; push-button; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/2231-309/026-000
	Item no.2231-309/031-000 1-conductor female plug; push-button; clamping collar; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/2231-309/031-000
	Item no.2231-309/102-000 1-conductor female plug; push-button; with integrated end plate; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/2231-309/102-000
	Item no.2231-309/037-000 1-conductor female plug; push-button; Locking lever; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/2231-309/037-000
	Item no.231-2309/026-000 2-conductor female connector; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/231-2309/026-000
	Item no.231-2309/037-000 2-conductor female connector; Locking lever; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/231-2309/037-000
	Item no.231-309/008-000 1-conductor female plug; Snap-in mounting feet; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/231-309/008-000
	Item no.231-309/026-000 1-conductor female plug; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/231-309/026-000
	Item no.231-309/031-000 1-conductor female plug; clamping collar; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/231-309/031-000
	Item no.231-309/027-000 1-conductor female plug; clamping collar; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/231-309/027-000
	Item no.231-309/037-000 1-conductor female plug; Locking lever; 2.5 mm ² ; Pin spacing 5.08 mm; 9-pole; 2,50 mm ² ; orange	www.wago.com/231-309/037-000

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



Item no.232-169

THT female header; 0.6 x 1.0 mm solder pin; straight; Pin spacing 5.08 mm; 9-pole; orange

www.wago.com/232-169



Item no.231-309/102-000

1-conductor female plug; with integrated end plate; 2.5 mm²; Pin spacing 5.08 mm; 9-pole; 2,50 mm²; orange

www.wago.com/231-309/102-000



Item no.232-169/031-000

THT female header; 0.6 x 1.0 mm solder pin; straight; clamping collar; Pin spacing 5.08 mm; 9-pole; orange

www.wago.com/232-169/031-000



Item no.232-169/047-000

THT female header; 0.6 x 1.0 mm solder pin; straight; Spacer flange; Pin spacing 5.08 mm; 9-pole; orange

www.wago.com/232-169/047-000



Item no.232-169/039-000

THT female header; 0.6 x 1.0 mm solder pin; straight; Locking lever; Pin spacing 5.08 mm; 9-pole; orange

www.wago.com/232-169/039-000



Item no.232-269

THT female header; 0.6 x 1.0 mm solder pin; angled; Pin spacing 5.08 mm; 9-pole; orange

www.wago.com/232-269



Item no.232-269/031-000

THT female header; 0.6 x 1.0 mm solder pin; angled; clamping collar; Pin spacing 5.08 mm; 9-pole; orange

www.wago.com/232-269/031-000



Item no.232-269/039-000

THT female header; 0.6 x 1.0 mm solder pin; angled; Locking lever; Pin spacing 5.08 mm; 9-pole; orange

www.wago.com/232-269/039-000

Compatible products

Insulation stop



Item no.: 231-670

Insulation stop; 0.08-0.2 mm² / 0.2 mm² "s"; white

www.wago.com/231-670

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Item no.: 231-671
Insulation stop; 0.25 - 0.5 mm²; light gray

www.wago.com/231-671

Item no.: 231-672
Insulation stop; 0.75 - 1 mm²; dark gray

www.wago.com/231-672

ferrule



Item no.: 216-101
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated

www.wago.com/216-101



Item no.: 216-102
Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated

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.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

www.wago.com/216-104

Item no.: 216-106
Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated

www.wago.com/216-106



Item no.: 216-121
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated

www.wago.com/216-121

Item no.: 216-122
Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated

www.wago.com/216-122

Item no.: 216-123
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated

www.wago.com/216-123



Item no.: 216-124
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

www.wago.com/216-124



Item no.: 216-131
Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated

www.wago.com/216-131

Item no.: 216-132
Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated

www.wago.com/216-132

Item no.: 216-141
Ferrule; Sleeve for 0.5 mm² / 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.: 216-142
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

www.wago.com/216-142






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

www.wago.com/216-143







Item no.: 216-144
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

www.wago.com/216-144

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

	Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-151
	Item no.: 216-152 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-152
	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.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
	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.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-222
	Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-223
	Item no.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-224
	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.: 216-243 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.: 216-262 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.: 216-263 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

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

	<p>Item no.: 216-284 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</p>	www.wago.com/216-284
	<p>Item no.: 216-301 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow</p>	www.wago.com/216-301
	<p>Item no.: 216-302 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green</p>	www.wago.com/216-302
	<p>Item no.: 216-321 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow</p>	www.wago.com/216-321
	<p>Item no.: 216-322 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green</p>	www.wago.com/216-322
tools		
	<p>Item no.: 209-130 Operating tool; suitable for 264, 280 and 281 Series; 1-way; of insulating material</p>	www.wago.com/209-130
	<p>Item no.: 209-132 Operating tool; for connecting comb-style jumper bar; 2-way; of insulating material</p>	www.wago.com/209-132
	<p>Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short</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</p>	www.wago.com/210-720
	<p>Item no.: 231-131 Push-button; loose</p>	www.wago.com/231-131
	<p>Item no.: 231-291 Operating tool; loose; red</p>	www.wago.com/231-291
	<p>Item no.: 280-432 Operating tool; made of insulating material; 2-way</p>	www.wago.com/280-432
	<p>Item no.: 280-433 Operating tool; made of insulating material; 3-way</p>	www.wago.com/280-433
	<p>Item no.: 280-434 Operating tool; made of insulating material; 4-way</p>	www.wago.com/280-434
	<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.: 280-437 Operating tool; made of insulating material; 7-way</p>	www.wago.com/280-437

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

Item no.: 280-438
Operating tool; made of insulating material; 8-way

www.wago.com/280-438

Item no.: 280-440
Operating tool; made of insulating material; 10-way

www.wago.com/280-440

Marking accessories

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.: 210-332/508-205
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

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.: 210-833
Marking strips; on reel; 6 mm wide; plain; Self-adhesive; white

www.wago.com/210-833



Item no.: 210-834
Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

www.wago.com/210-834

General accessories

Item no.: 231-669
Lockout caps; for covering unused clamping units; orange

www.wago.com/231-669

Strain relief plate



Item no.: 232-639
Strain relief housing; orange

www.wago.com/232-639

Coding

Item no.: 231-129
Coding key; snap-on type; light gray

www.wago.com/231-129

Jumper



Item no.: 231-902
Comb-style jumper bar; for 5 mm and 5.08 mm pin spacing; reduces conductor size to 1.5 mm; gray

www.wago.com/231-902

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

Item no.: 231-903

Comb-style jumper bar; 3-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray www.wago.com/231-903



Item no.: 231-905

Comb-style jumper bar; 5-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray www.wago.com/231-905

Item no.: 231-907

Comb-style jumper bar; 7-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray www.wago.com/231-907

Item no.: 231-910

Comb-style jumper bar; 10-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated; gray www.wago.com/231-910

Downloads

Documentation

Additional Information

Technical explanations	Apr 3, 2019	pdf 3.6 MB	Download
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CAD/CAE-Data

CAD data

2D/3D Models 231-639	URL	Download
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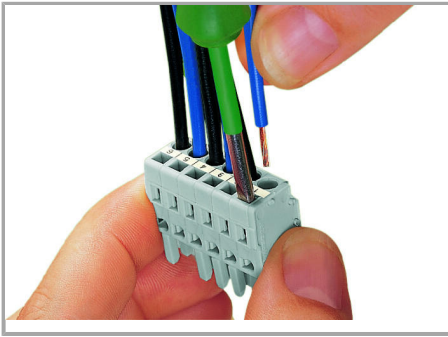
CAE data

EPLAN Data Portal 231-639	URL	Download
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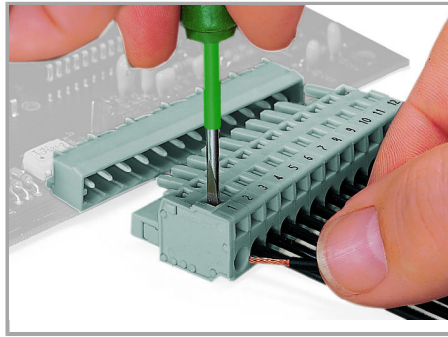
Installation Notes

Inserting a conductor

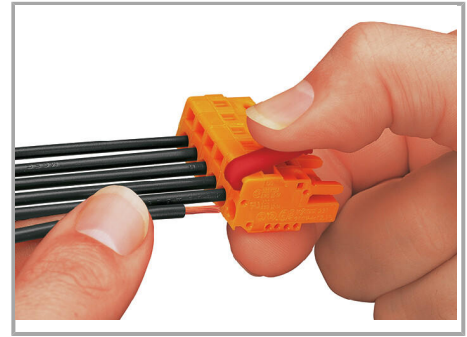
Subject to changes. Please also observe the further product documentation!



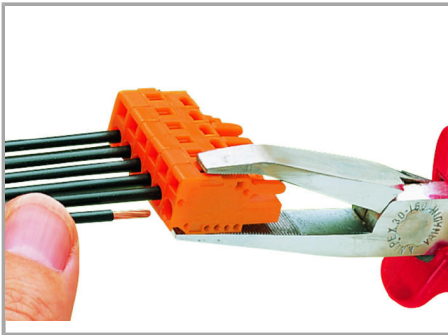
Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.



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

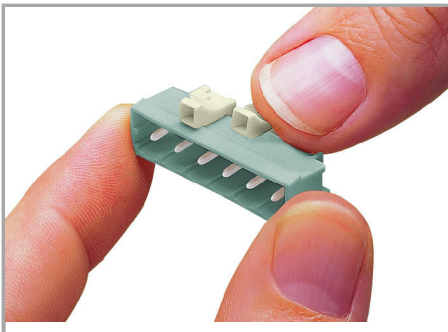


Inserting a conductor into CAGE CLAMP® unit via operating lever (231-291).



Inserting a conductor via operating tool.

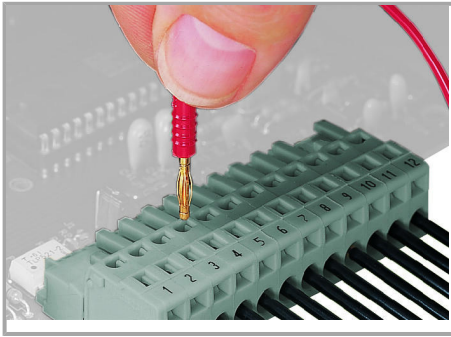
Coding



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

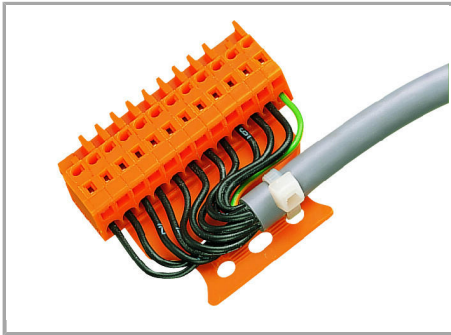
Testing

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

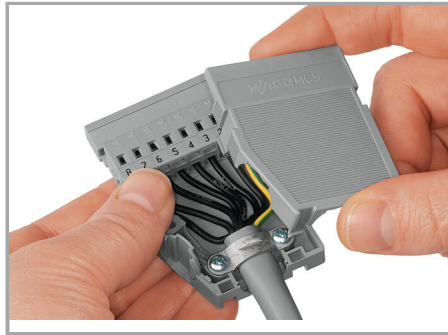


Testing perpendicular to conductor entry via 2 or 2.3 mm Ø test plug – female connector with CAGE CLAMP®.

Assembly

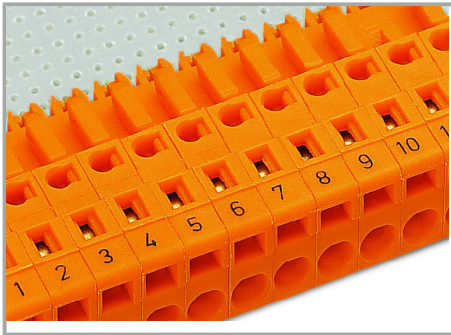


Male connector with strain relief plate



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

Marking



Labeling via direct marking or self-adhesive strips.

Product family

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



MCS MIDI Classic

[Learn more about the product family.](#)

[Show all products from the family](#)

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

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