

Data sheet | Item number: 231-650/114-000

1-conductor male connector; Snap-in flange; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm;  
20-pole; 2,50 mm<sup>2</sup>; orange



[www.wago.com/231-650\\_114-000](http://www.wago.com/231-650_114-000)

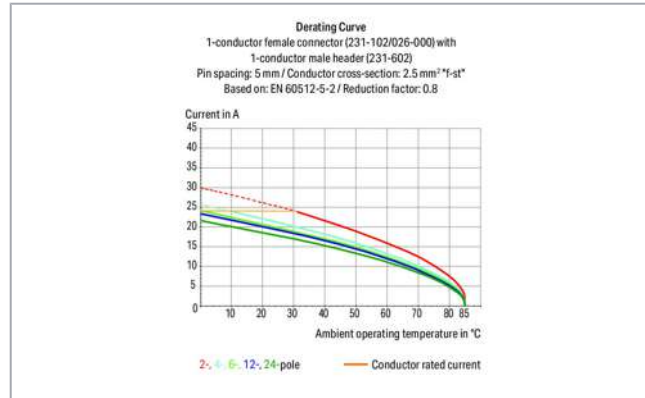


 Picture differs from the item.

RoHS   
Compliant



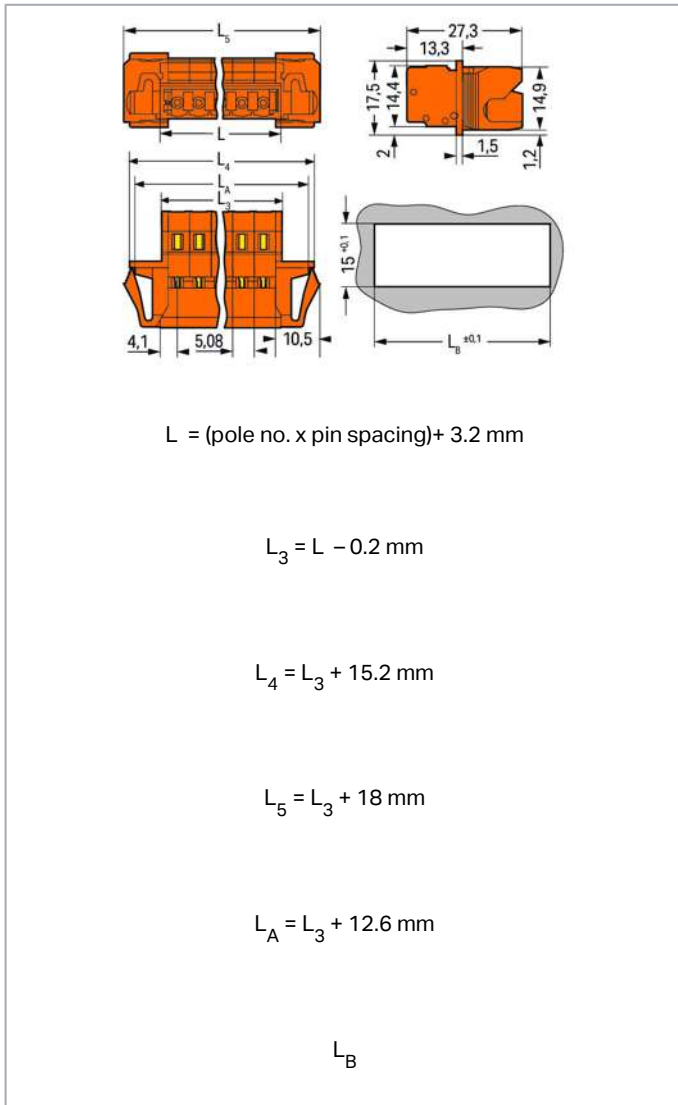
Color: 



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

WAGO Corporation  
Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

Do you have any questions about our products?  
We are always happy to take your call at {0}.



### 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 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. The circuit design should ensure header pins, which can be touched, are not live when unmated.

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



## Data

### Electrical data

#### Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60664-1
Rated voltage (III / 3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge 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) $\hat{=}$ 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 technology	CAGE CLAMP®
-----------------------	-------------

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



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 inch
Pole No.	20
Total number of connection points	20
Total number of potentials	20
Number of connection types	1
Number of levels	1
Conductor entry direction to mating direction	0°

### Physical data

Pin spacing	5.08 mm / 0.2 inch
Width	122.6 mm / 4.827 inch
Height	17.5 mm / 0.689 inch
Depth	27.5 mm / 1.083 inch

### Mechanical data

Housing sheet thickness	0.5 ... 2.5 mm / 0.02 ... 0.098 inch
Mounting type	Snap-in
Mounting type	Feed-through mounting

### Plug-in connection

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

### Material Data

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> )

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

WAGO Corporation  
 Germantown, WI 53022  
 Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
 Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

Do you have any questions about our products?  
 We are always happy to take your call at {0}.

Contact plating	tin-plated
Fire load	0.564 MJ
Weight	32.9 g

### Environmental Requirements



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

### Commercial data


Product Group	3 (Multi Conn. System)
Packaging type	BOX
Country of origin	DE
GTIN	4050821279921
Customs tariff number	85366990990

### Approvals / Certificates

#### Country specific Approvals

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

#### Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>BV</b> Bureau Veritas S.A.	IEC 60998	11915/D0 BV

#### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
------	----------	--------------------------	------------------

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



cURus  
Underwriters Laboratories Inc.

UL 1059

E45172  
vol. 1 sec.  
18



UR  
Underwriters Laboratories Inc.

UL 1977

E45171  
sec. 5

## Counterpart



Item no. 231-320/026-000  
1-conductor female plug; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 20-pole; 2,50 mm<sup>2</sup>; orange

[www.wago.com/231-320/026-000](http://www.wago.com/231-320/026-000)

## Compatible products

### Coding



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

[www.wago.com/231-129](http://www.wago.com/231-129)

### Jumper



Item no.: 231-902  
Jumper; for conductor entry; gray

[www.wago.com/231-902](http://www.wago.com/231-902)



Item no.: 231-903  
Jumper; for conductor entry; 3-way; insulated; gray

[www.wago.com/231-903](http://www.wago.com/231-903)



Item no.: 231-905  
Jumper; for conductor entry; 5-way; insulated; gray

[www.wago.com/231-905](http://www.wago.com/231-905)



Item no.: 231-907  
Jumper; for conductor entry; 7-way; insulated; gray

[www.wago.com/231-907](http://www.wago.com/231-907)



Item no.: 231-910  
Jumper; for conductor entry; 10-way; insulated; gray

[www.wago.com/231-910](http://www.wago.com/231-910)

### ferrule



Item no.: 216-101  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored

[www.wago.com/216-101](http://www.wago.com/216-101)



Item no.: 216-102  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored

[www.wago.com/216-102](http://www.wago.com/216-102)



Item no.: 216-103  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated

[www.wago.com/216-103](http://www.wago.com/216-103)

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

WAGO Corporation  
Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

Do you have any questions about our products?  
We are always happy to take your call at {0}.

	<b>Item no.: 216-104</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-104">www.wago.com/216-104</a>
	<b>Item no.: 216-106</b> Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-106">www.wago.com/216-106</a>
	<b>Item no.: 216-121</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-121">www.wago.com/216-121</a>
	<b>Item no.: 216-122</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-122">www.wago.com/216-122</a>
	<b>Item no.: 216-123</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-123">www.wago.com/216-123</a>
	<b>Item no.: 216-124</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-124">www.wago.com/216-124</a>
	<b>Item no.: 216-131</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-131">www.wago.com/216-131</a>
	<b>Item no.: 216-132</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-132">www.wago.com/216-132</a>
	<b>Item no.: 216-141</b> 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	<a href="http://www.wago.com/216-141">www.wago.com/216-141</a>
	<b>Item no.: 216-142</b> 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	<a href="http://www.wago.com/216-142">www.wago.com/216-142</a>
	<b>Item no.: 216-143</b> 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	<a href="http://www.wago.com/216-143">www.wago.com/216-143</a>
	<b>Item no.: 216-144</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	<a href="http://www.wago.com/216-144">www.wago.com/216-144</a>
	<b>Item no.: 216-151</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-151">www.wago.com/216-151</a>
	<b>Item no.: 216-152</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-152">www.wago.com/216-152</a>
	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
	<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-202">www.wago.com/216-202</a>
	<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-203">www.wago.com/216-203</a>
	<b>Item no.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-204">www.wago.com/216-204</a>




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

	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
	<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-224">www.wago.com/216-224</a>
	<b>Item no.: 216-241</b> 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	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<b>Item no.: 216-242</b> 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	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<b>Item no.: 216-243</b> 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	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<b>Item no.: 216-244</b> 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	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>
	<b>Item no.: 216-262</b> 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	<a href="http://www.wago.com/216-262">www.wago.com/216-262</a>
	<b>Item no.: 216-263</b> 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	<a href="http://www.wago.com/216-263">www.wago.com/216-263</a>
	<b>Item no.: 216-264</b> 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	<a href="http://www.wago.com/216-264">www.wago.com/216-264</a>
	<b>Item no.: 216-284</b> 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	<a href="http://www.wago.com/216-284">www.wago.com/216-284</a>
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-301">www.wago.com/216-301</a>
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-321">www.wago.com/216-321</a>
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>



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




### Insulation stop

	<b>Item no.: 231-670</b> Insulation stop; 0.08-0.2 mm <sup>2</sup> / 0.2 mm <sup>2</sup> "s"; white	<a href="http://www.wago.com/231-670">www.wago.com/231-670</a>
	<b>Item no.: 231-671</b> Insulation stop; 0.25 - 0.5 mm <sup>2</sup> ; light gray	<a href="http://www.wago.com/231-671">www.wago.com/231-671</a>
	<b>Item no.: 231-672</b> Insulation stop; 0.75 - 1 mm <sup>2</sup> ; dark gray	<a href="http://www.wago.com/231-672">www.wago.com/231-672</a>



### Marking accessories

	<b>Item no.: 210-331/508-103</b> 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	<a href="http://www.wago.com/210-331/508-103">www.wago.com/210-331/508-103</a>
	<b>Item no.: 210-331/508-104</b> 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	<a href="http://www.wago.com/210-331/508-104">www.wago.com/210-331/508-104</a>
	<b>Item no.: 210-332/508-202</b> 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	<a href="http://www.wago.com/210-332/508-202">www.wago.com/210-332/508-202</a>
	<b>Item no.: 210-332/508-204</b> 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	<a href="http://www.wago.com/210-332/508-204">www.wago.com/210-332/508-204</a>
	<b>Item no.: 210-332/508-205</b> 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	<a href="http://www.wago.com/210-332/508-205">www.wago.com/210-332/508-205</a>
	<b>Item no.: 210-332/508-206</b> 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	<a href="http://www.wago.com/210-332/508-206">www.wago.com/210-332/508-206</a>
	<b>Item no.: 210-833</b> Marking strips; on reel; 6 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-833">www.wago.com/210-833</a>
	<b>Item no.: 210-834</b> Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-834">www.wago.com/210-834</a>













### General accessories

	<b>Item no.: 231-669</b> Lockout caps; for covering unused clamping units; orange	<a href="http://www.wago.com/231-669">www.wago.com/231-669</a>
--	--	--

### tools

	<b>Item no.: 209-130</b> Operating tool; suitable for 264, 280 and 281 Series; 1-way; of insulating material; white	<a href="http://www.wago.com/209-130">www.wago.com/209-130</a>
	<b>Item no.: 209-132</b> Operating tool; for connecting comb-style jumper bar; 2-way; of insulating material	<a href="http://www.wago.com/209-132">www.wago.com/209-132</a>

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

	<b>Item no.: 210-657</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	<a href="http://www.wago.com/210-657">www.wago.com/210-657</a>
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>
	<b>Item no.: 231-131</b> Push-button; loose	<a href="http://www.wago.com/231-131">www.wago.com/231-131</a>
	<b>Item no.: 231-291</b> Operating tool; loose; red	<a href="http://www.wago.com/231-291">www.wago.com/231-291</a>
	<b>Item no.: 280-432</b> Operating tool; made of insulating material; 2-way; white	<a href="http://www.wago.com/280-432">www.wago.com/280-432</a>
	<b>Item no.: 280-433</b> Operating tool; made of insulating material; 3-way	<a href="http://www.wago.com/280-433">www.wago.com/280-433</a>
	<b>Item no.: 280-434</b> Operating tool; made of insulating material; 4-way	<a href="http://www.wago.com/280-434">www.wago.com/280-434</a>
	<b>Item no.: 280-435</b> Operating tool; made of insulating material; 5-way; gray	<a href="http://www.wago.com/280-435">www.wago.com/280-435</a>
	<b>Item no.: 280-436</b> Operating tool; made of insulating material; 6-way	<a href="http://www.wago.com/280-436">www.wago.com/280-436</a>
	<b>Item no.: 280-437</b> Operating tool; made of insulating material; 7-way	<a href="http://www.wago.com/280-437">www.wago.com/280-437</a>
	<b>Item no.: 280-438</b> Operating tool; made of insulating material; 8-way	<a href="http://www.wago.com/280-438">www.wago.com/280-438</a>
	<b>Item no.: 280-440</b> Operating tool; made of insulating material; 10-way	<a href="http://www.wago.com/280-440">www.wago.com/280-440</a>

## Downloads

### Documentation

#### Additional Information

Technical explanations	Apr 3, 2019	pdf 3.6 MB	Download
------------------------	-------------	---------------	----------

### CAD files

#### CAD data

2D/3D Models 231-650/114-000	URL	Download
------------------------------	-----	----------

#### CAE data

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

WAGO Corporation  
Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

Do you have any questions about our products?  
We are always happy to take your call at {0}.

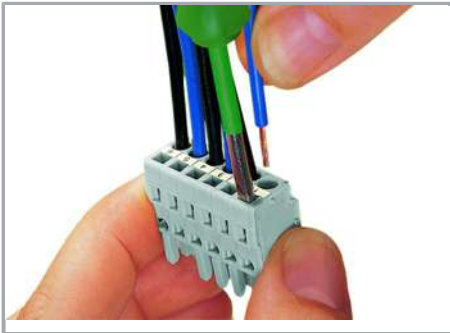
## Installation Notes

### Application

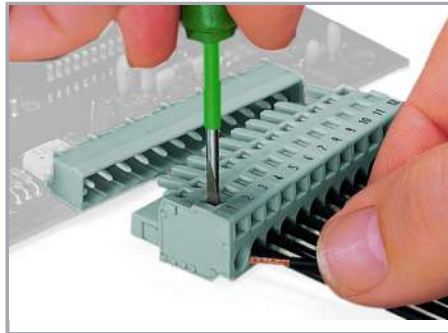


Male connector, with snap-in flanges for feedthrough applications, for 0.5 ... 2.5 mm plate thickness

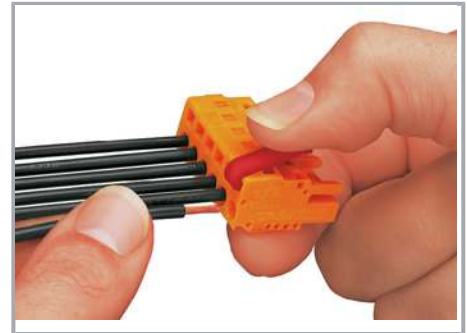
### Conductor termination



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.



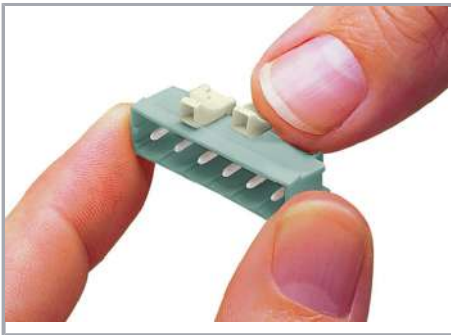
Inserting a conductor into CAGE CLAMP® unit via operating lever (231-291).

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



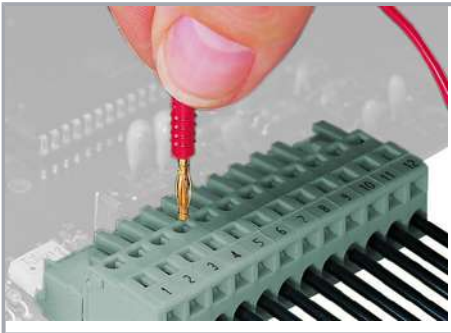
Inserting a conductor via operating tool.

### Coding



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

### Testing



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

### Installation

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

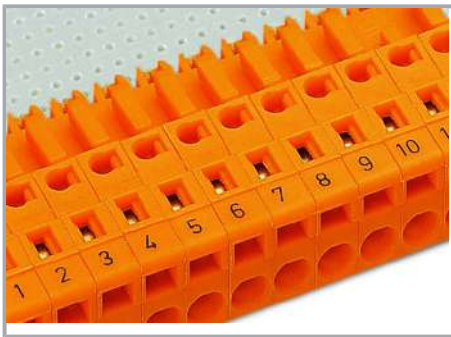


Male connector with strain relief plate



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

### Marking



Labeling via direct marking or self-adhesive strips.

### Product family

[\*MCS\*](#) MIDI Classic

[Show all products from the family](#)

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