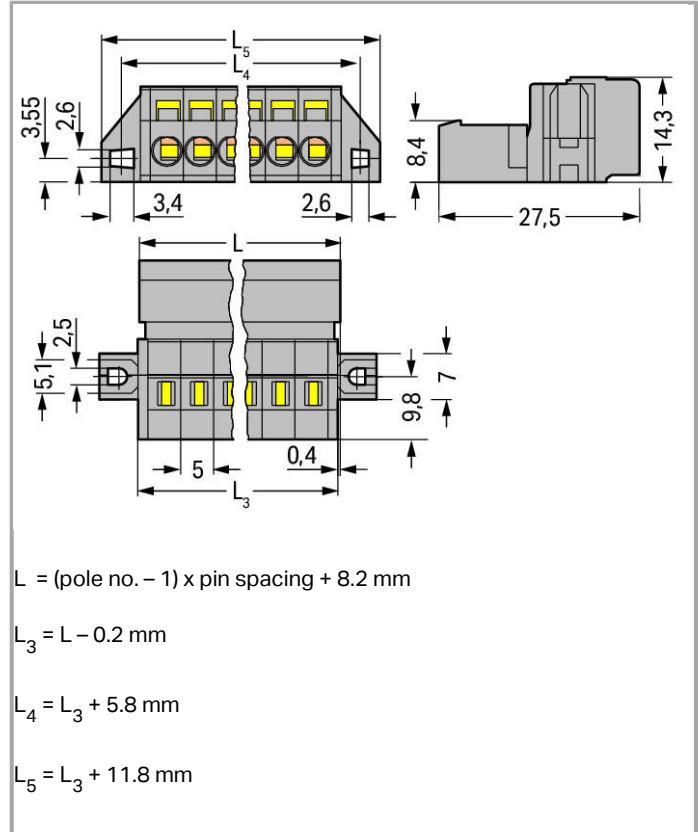
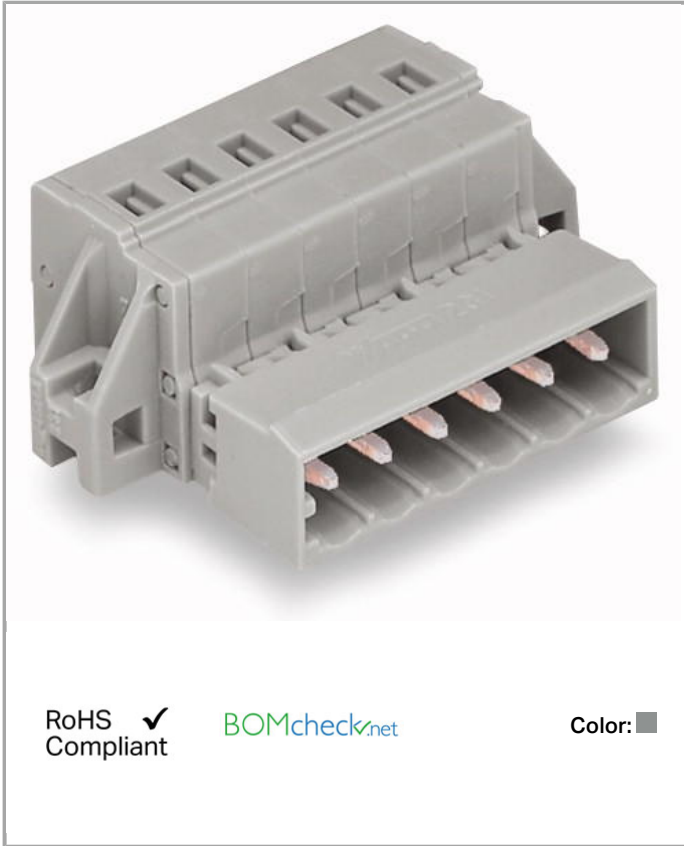


## Data sheet | Item number: 231-610/019-000/035-000

1-conductor male connector; clamping collar; Strain relief plate; 2.5 mm<sup>2</sup>;  
Pin spacing 5 mm; 10-pole



[www.wago.com/231-610/019-000/035-000](http://www.wago.com/231-610/019-000/035-000)



### 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

Other variants can be requested via the WAGO sales department or, if necessary, configured at <https://configurator.wago.com/>: Gold-plated or partially gold-plated contact surfaces, Other pole numbers

### Data

#### Electrical data

#### 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) $\hat{=}$ 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 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 <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor with ferrule with plastic collar	0.25 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor with ferrule without plastic collar	0.25 ... 2.5 mm <sup>2</sup>
Strip length	8 ... 9 mm / 0.31 ... 0.35 Inch
No. of poles	10
Total number of potentials	10
Number of connection types	1
Number of levels	1
Conductor entry direction to mating direction	0°

### Geometrical Data

Pin spacing	5 mm (0.197 inch)
Width	64.8 mm / 2.551 inch
Height	14.3 mm / 0.563 inch
Depth	62.5 mm / 2.461 inch

## Mechanical data

Mounting type	Mounting flange
Type of mounting	Feed-through mounting Panel mounting

## Plug connection

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

## Material Data

Color	gray
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 (Ecu)
Contact plating	tin-plated
Fire load	0.367 MJ
Weight	18.23 g

## Environmental Requirements



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


Country of origin	DE
GTIN	4044918279826
Customs Tariff No.	85366990990
Product Group	3 (Multi Conn. System)

## Approvals / Certificates

### Ship Approvals




Logo	Approval	Certificate name
	<b>ABS</b> American Bureau of Shipping	14-HG1241537-PDA
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	TAE000016Z

## UL-Approvals






Logo	Approval	Certificate name
	UR UL International Germany GmbH	E45171

## Compatible products

## Insulation stop

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




## Jumper

	<b>Item no.:</b> 231-902 Comb-style jumper bar; for 5 mm and 5.08 mm pin spacing; reduces conductor size to 1.5 mm	<a href="http://www.wago.com/231-902">www.wago.com/231-902</a>
	<b>Item no.:</b> 231-903 Comb-style jumper bar; 3-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated	<a href="http://www.wago.com/231-903">www.wago.com/231-903</a>
	<b>Item no.:</b> 231-905 Comb-style jumper bar; 5-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated	<a href="http://www.wago.com/231-905">www.wago.com/231-905</a>
	<b>Item no.:</b> 231-907 Comb-style jumper bar; 7-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated	<a href="http://www.wago.com/231-907">www.wago.com/231-907</a>
	<b>Item no.:</b> 231-910 Comb-style jumper bar; 10-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated	<a href="http://www.wago.com/231-910">www.wago.com/231-910</a>

## Strain relief plate

	<b>Item no.:</b> 232-610 Strain relief housing	<a href="http://www.wago.com/232-610">www.wago.com/232-610</a>
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## assembling

	<b>Item no.:</b> 209-147 Self-tapping screw	<a href="http://www.wago.com/209-147">www.wago.com/209-147</a>
	<b>Item no.:</b> 231-194 Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø	<a href="http://www.wago.com/231-194">www.wago.com/231-194</a>
	<b>Item no.:</b> 231-195 Screw with nut; M2x12; for fixing element	<a href="http://www.wago.com/231-195">www.wago.com/231-195</a>

## Coding


















**Item no.:** 231-129


















Coding key; snap-on type

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

## ferrule

**Item no.:** 216-101Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated[www.wago.com/216-101](http://www.wago.com/216-101)**Item no.:** 216-102Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated[www.wago.com/216-102](http://www.wago.com/216-102)**Item no.:** 216-103Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated[www.wago.com/216-103](http://www.wago.com/216-103)**Item no.:** 216-104Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; uninsulated; electro-tin plated[www.wago.com/216-104](http://www.wago.com/216-104)**Item no.:** 216-106Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; uninsulated; electro-tin plated[www.wago.com/216-106](http://www.wago.com/216-106)**Item no.:** 216-121Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated[www.wago.com/216-121](http://www.wago.com/216-121)**Item no.:** 216-122Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated[www.wago.com/216-122](http://www.wago.com/216-122)**Item no.:** 216-123Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated[www.wago.com/216-123](http://www.wago.com/216-123)**Item no.:** 216-124Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; uninsulated; electro-tin plated[www.wago.com/216-124](http://www.wago.com/216-124)**Item no.:** 216-131Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated[www.wago.com/216-131](http://www.wago.com/216-131)**Item no.:** 216-132Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated[www.wago.com/216-132](http://www.wago.com/216-132)**Item no.:** 216-141Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92[www.wago.com/216-141](http://www.wago.com/216-141)**Item no.:** 216-142Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92[www.wago.com/216-142](http://www.wago.com/216-142)**Item no.:** 216-143Ferrule; 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[www.wago.com/216-143](http://www.wago.com/216-143)**Item no.:** 216-144Ferrule; 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[www.wago.com/216-144](http://www.wago.com/216-144)**Item no.:** 216-151Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated[www.wago.com/216-151](http://www.wago.com/216-151)**Item no.:** 216-152Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated[www.wago.com/216-152](http://www.wago.com/216-152)

	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; insulated; electro-tin plated	<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> / AWG 20; insulated; electro-tin plated	<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	<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	<a href="http://www.wago.com/216-204">www.wago.com/216-204</a>
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; insulated; electro-tin plated	<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> / AWG 20; insulated; electro-tin plated	<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	<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	<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> / AWG 22; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	<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> / AWG 20; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	<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	<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	<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> / AWG 20; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90	<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	<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	<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	<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	<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> / AWG 24; insulated; electro-tin plated	<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	<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> / AWG 24; insulated; electro-tin plated	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>
<b>Marking accessories</b>		
	<b>Item no.: 210-833</b> Marking strips; on reel; 6 mm wide; plain; Self-adhesive	<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	<a href="http://www.wago.com/210-834">www.wago.com/210-834</a>
<b>General accessories</b>		
	<b>Item no.: 231-668</b> Lockout caps; for covering unused clamping units	<a href="http://www.wago.com/231-668">www.wago.com/231-668</a>
<b>tools</b>		
	<b>Item no.: 209-130</b> Operating tool; suitable for 264, 280 and 281 Series; 1-way; of insulating material	<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>
	<b>Item no.: 210-250</b> Operating tool; for female and male connectors with CAGE CLAMP® connection; MCS MIDI & MINI	<a href="http://www.wago.com/210-250">www.wago.com/210-250</a>
	<b>Item no.: 210-657</b> Operating tool with partially insulated shaft; Blade (3.5 x 0.5) mm; short	<a href="http://www.wago.com/210-657">www.wago.com/210-657</a>
	<b>Item no.: 210-720</b> Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>
	<b>Item no.: 231-131</b> Push-button; for female and male connectors; loose	<a href="http://www.wago.com/231-131">www.wago.com/231-131</a>
	<b>Item no.: 231-159</b> Operating tool; for male and female connectors with CAGE CLAMP®; of Series 231, 232, 721, 722, 723, 731, 732	<a href="http://www.wago.com/231-159">www.wago.com/231-159</a>
	<b>Item no.: 231-231</b> Combination operating tool; for male and female connectors with CAGE CLAMP®	<a href="http://www.wago.com/231-231">www.wago.com/231-231</a>
	<b>Item no.: 231-291</b> Operating tool; for male and female connectors with CAGE CLAMP®; loose	<a href="http://www.wago.com/231-291">www.wago.com/231-291</a>
	<b>Item no.: 280-432</b> Operating tool; of insulating material; 2-way	<a href="http://www.wago.com/280-432">www.wago.com/280-432</a>
	<b>Item no.: 280-433</b> Operating tool; 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; of insulating material; 4-way	<a href="http://www.wago.com/280-434">www.wago.com/280-434</a>



**Item no.: 280-435**  
Operating tool; of insulating material; 5-way

[www.wago.com/280-435](http://www.wago.com/280-435)



**Item no.: 280-436**  
Operating tool; of insulating material; 6-way

[www.wago.com/280-436](http://www.wago.com/280-436)



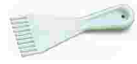
**Item no.: 280-437**  
Operating tool; of insulating material; 7-way

[www.wago.com/280-437](http://www.wago.com/280-437)



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

[www.wago.com/280-438](http://www.wago.com/280-438)



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

[www.wago.com/280-440](http://www.wago.com/280-440)

Subject to changes.