

## Data sheet | Item number: 231-109/031-000

1-conductor female plug; clamping collar; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 9-pole

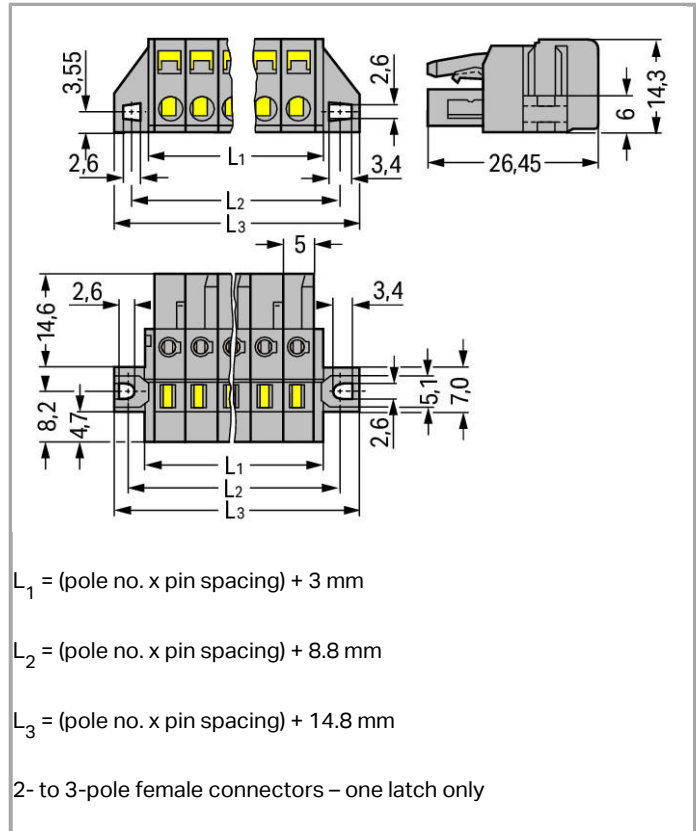
[www.wago.com/231-109/031-000](http://www.wago.com/231-109/031-000)



RoHS  Compliant

[BOMcheck.net](https://www.bomcheck.net)

Color: ■



### Item description

- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- Integrated test ports
- 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

### 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	16 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 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	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 mm (0.197 inch)
Width	59.8 mm / 2.354 inch
Height	14.3 mm / 0.563 inch
Depth	26.45 mm / 1.041 inch

## Mechanical data

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

## Plug connection

Contact type (pluggable connector)	Female connector/socket
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	Copper alloy
Contact plating	tin-plated
Fire load	0.248 MJ
Weight	16.669 g

## Environmental Requirements


Limit temperature range	-60 ... +85 °C
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## Commercial data



Country of origin	DE
GTIN	4044918340649
Customs Tariff No.	85366990990
Product Group	3 (Multi Conn. System)

## Approvals / Certificates




### Country specific Approvals

Logo	Approval	Certificate name
	CB DEKRA Certification B.V.	NL-39756
	CSA DEKRA Certification B.V.	1466354

### 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
	<b>UL</b> Underwriters Laboratories Inc.	E45172
	<b>UR</b> UL International Germany GmbH	E45171
	<b>UR</b> UL International Germany GmbH	E45171

## Compatible products

## ferrule

	<b>Item no.: 216-101</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-101">www.wago.com/216-101</a>
	<b>Item no.: 216-102</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-102">www.wago.com/216-102</a>
	<b>Item no.: 216-103</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-103">www.wago.com/216-103</a>
	<b>Item no.: 216-104</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated	<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	<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	<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	<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	<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	<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> / AWG 22; 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> / AWG 20; 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	<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> / 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>


















#### Strain relief plate





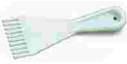
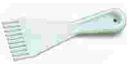
	<b>Item no.: 232-609</b> Strain relief housing	<a href="http://www.wago.com/232-609">www.wago.com/232-609</a>
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#### Jumper




	<b>Item no.: 231-902</b> 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.: 231-903</b> 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.: 231-905</b> 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.: 231-907</b> 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.: 231-910</b> 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>

#### 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>
<b>General accessories</b>		
	<b>Item no.:</b> 231-668 Lockout caps; for covering unused clamping units	<a href="http://www.wago.com/231-668">www.wago.com/231-668</a>
<b>Insulation stop</b>		
	<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>
<b>tools</b>		
	<b>Item no.:</b> 209-130 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.:</b> 209-132 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.:</b> 210-657 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.:</b> 210-720 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.:</b> 231-131 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.:</b> 231-159 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.:</b> 231-231 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.:</b> 231-291 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.:</b> 280-432 Operating tool; of insulating material; 2-way	<a href="http://www.wago.com/280-432">www.wago.com/280-432</a>
	<b>Item no.:</b> 280-433 Operating tool; of insulating material; 3-way	<a href="http://www.wago.com/280-433">www.wago.com/280-433</a>
	<b>Item no.:</b> 280-434	

	Operating tool; 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; of insulating material; 5-way	<a href="http://www.wago.com/280-435">www.wago.com/280-435</a>
	<b>Item no.: 280-436</b> Operating tool; 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; 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; 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; of insulating material; 10-way	<a href="http://www.wago.com/280-440">www.wago.com/280-440</a>

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	<b>Item no.: 210-136</b> Test plug; 2 mm Ø; with 500 mm cable	<a href="http://www.wago.com/210-136">www.wago.com/210-136</a>
	<b>Item no.: 210-137</b> Test plug; 2.3 mm Ø; with 500 mm cable	<a href="http://www.wago.com/210-137">www.wago.com/210-137</a>
	<b>Item no.: 231-661</b> Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing	<a href="http://www.wago.com/231-661">www.wago.com/231-661</a>

Downloads  
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CAD data

3D Download 231-109/031-000	URL	Download
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Subject to changes.