

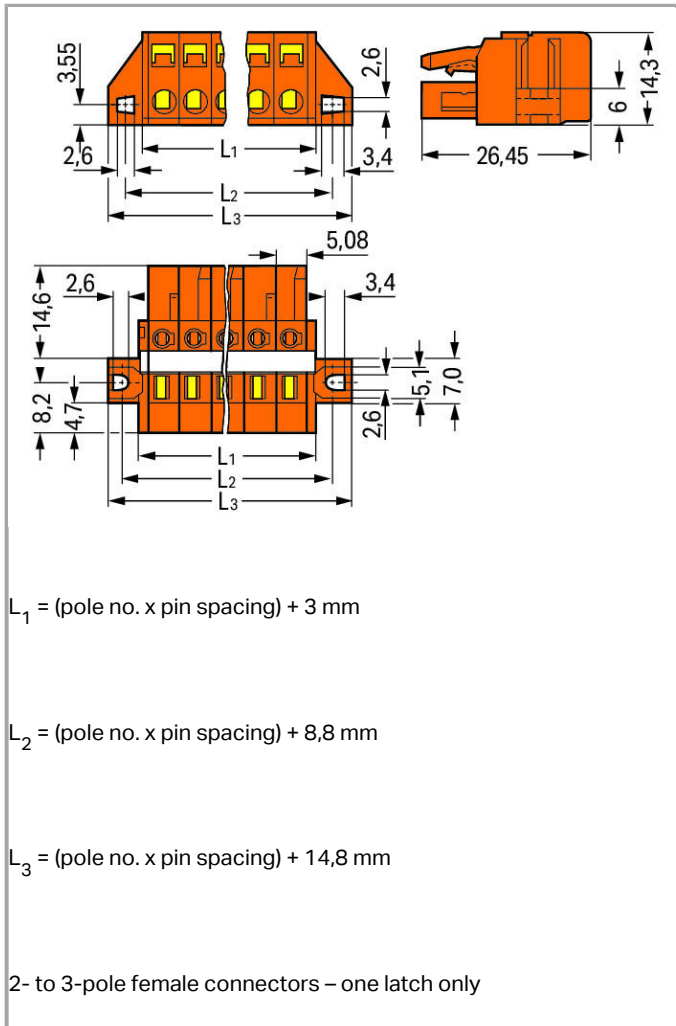
Data sheet | Item number: 231-309/027-000

1-conductor female plug; clamping collar; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 9-pole



231-309/027-000





### 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

### 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

### 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

### 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 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 <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°

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### Geometrical Data

Pin spacing	5.08 mm / 0.2 inch
Width	60.52 mm / 2.383 inch
Height	14.3 mm / 0.563 inch
Depth	26.45 mm / 1.041 inch

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### Mechanical data

Mounting type	Mounting flange
Type of mounting	Feed-through mounting Panel mounting
with reinforcing strip	1

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### Plug connection

Contact type (pluggable connector)	Female connector/socket
Connector connection type	for conductors
Mismating protection	No

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### 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	Copper alloy
Contact plating	tin-plated
Fire load	0.26 MJ
Weight	17.573 g

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### Environmental Requirements

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

Product Group	3 (Multi Conn. System)
Country of origin	DE
GTIN	4044918347785
Customs Tariff No.	85366990990



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### Approvals / Certificates

## Country specific Approvals

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

















## UL-Approvals

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

## Compatible products

## 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		210-331
<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		210-331
<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		210-332
<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		210-332

	<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	210-332 /508-205
	<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	210-332 /508-206
<b>check</b>		
	<b>Item no.: 210-136</b> Test plug; 2 mm Ø; with 500 mm cable	210-136
	<b>Item no.: 210-137</b> Test plug; 2.3 mm Ø; with 500 mm cable	210-137
	<b>Item no.: 231-661</b> Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing	231-661
<b>tools</b>		
	<b>Item no.: 209-130</b> Operating tool; suitable for 264, 280 and 281 Series; 1-way; of insulating material	209-130
	<b>Item no.: 209-132</b> Operating tool; for connecting comb-style jumper bar; 2-way; of insulating material	209-132
	<b>Item no.: 231-131</b> Push-button; for female and male connectors; loose	231-131
	<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	231-159
	<b>Item no.: 231-231</b> Combination operating tool; for male and female connectors with CAGE CLAMP®	231-231
	<b>Item no.: 231-291</b> Operating tool; for male and female connectors with CAGE CLAMP®; loose	231-291
	<b>Item no.: 280-432</b> Operating tool; of insulating material; 2-way	280-432
	<b>Item no.: 280-433</b> Operating tool; of insulating material; 3-way	280-433
	<b>Item no.: 280-434</b> Operating tool; of insulating material; 4-way	280-434
	<b>Item no.: 280-435</b> Operating tool; of insulating material; 5-way	280-435
	<b>Item no.: 280-436</b> Operating tool; of insulating material; 6-way	280-436
	<b>Item no.: 280-437</b> Operating tool; of insulating material; 7-way	280-437
	<b>Item no.: 280-438</b> Operating tool; of insulating material; 8-way	280-438



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

280-440

#### Insulation stop



**Item no.: 231-670**  
Insulation stop; 0.08-0.2 mm<sup>2</sup> / 0.2 mm<sup>2</sup> "s"

231-670



**Item no.: 231-671**  
Insulation stop; 0.25 - 0.5 mm<sup>2</sup>

231-671



**Item no.: 231-672**  
Insulation stop; 0.75 - 1 mm<sup>2</sup>

231-672

#### General accessories



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

231-669

#### 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

231-902



**Item no.: 231-903**  
Comb-style jumper bar; 3-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated

231-903



**Item no.: 231-905**  
Comb-style jumper bar; 5-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated

231-905



**Item no.: 231-907**  
Comb-style jumper bar; 7-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated

231-907



**Item no.: 231-910**  
Comb-style jumper bar; 10-way; suitable for 231 Series female connectors; with 5 mm pin spacing; insulated

231-910

#### ferrule



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

216-101



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

216-102



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

216-103



**Item no.: 216-104**  
Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; uninsulated; electro-tin plated

216-104



**Item no.: 216-106**  
Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; uninsulated; electro-tin plated

216-106



**Item no.: 216-121**  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated

216-121






















**Item no.: 216-122**  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated










216-122



**Item no.: 216-123**  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated

216-123

	<b>Item no.: 216-124</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated	216-124
	<b>Item no.: 216-131</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	216-131
	<b>Item no.: 216-132</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	216-132
	<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	216-141
	<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	216-142
	<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	216-143
	<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	216-144
	<b>Item no.: 216-151</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	216-151
	<b>Item no.: 216-152</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	216-152
	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated	216-201
	<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated	216-202
	<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated	216-203
	<b>Item no.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated	216-204
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated	216-221
	<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated	216-222
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated	216-223
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated	216-224
	<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	216-241
	<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	216-242

	<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	216-243
	<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	216-244
	<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	216-262
	<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	216-263
	<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	216-264
	<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	216-284
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated	216-301
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated	216-302
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated	216-321
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated	216-322
<b>Strain relief plate</b>		
	<b>Item no.: 232-639</b> Strain relief housing	232-639

## Downloads

## CAD/CAE - Smart Data

## CAD data

	URL	Download
3D Download 231-309/027-000		

Subject to changes.