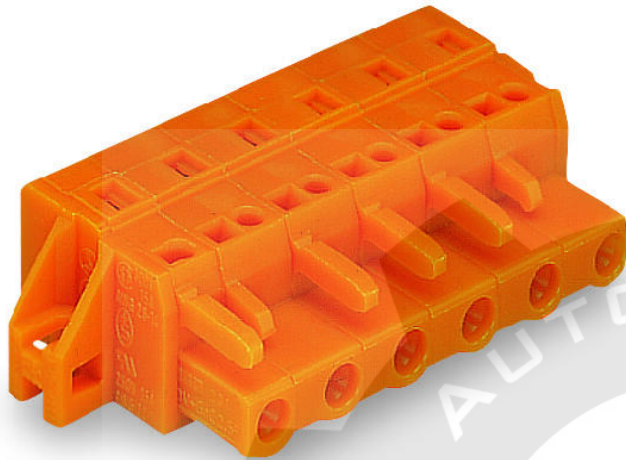


## Data sheet | Item number: 231-707/031-000

1-conductor female plug; clamping collar; 2.5 mm<sup>2</sup>; Pin spacing 7.62 mm; 7-pole



231-707/031-000



RoHS Compliant

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

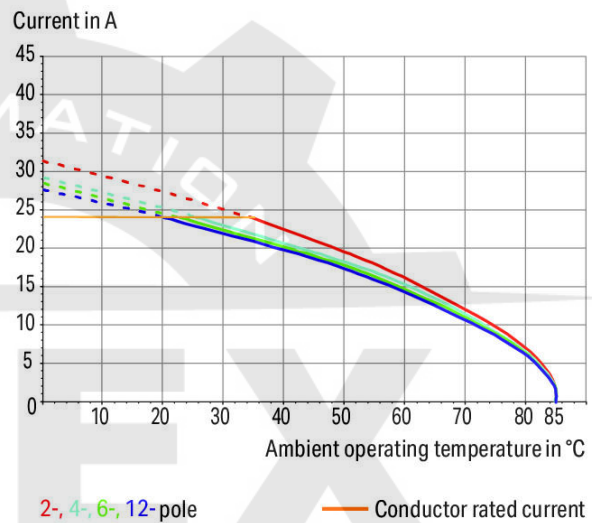
Color:

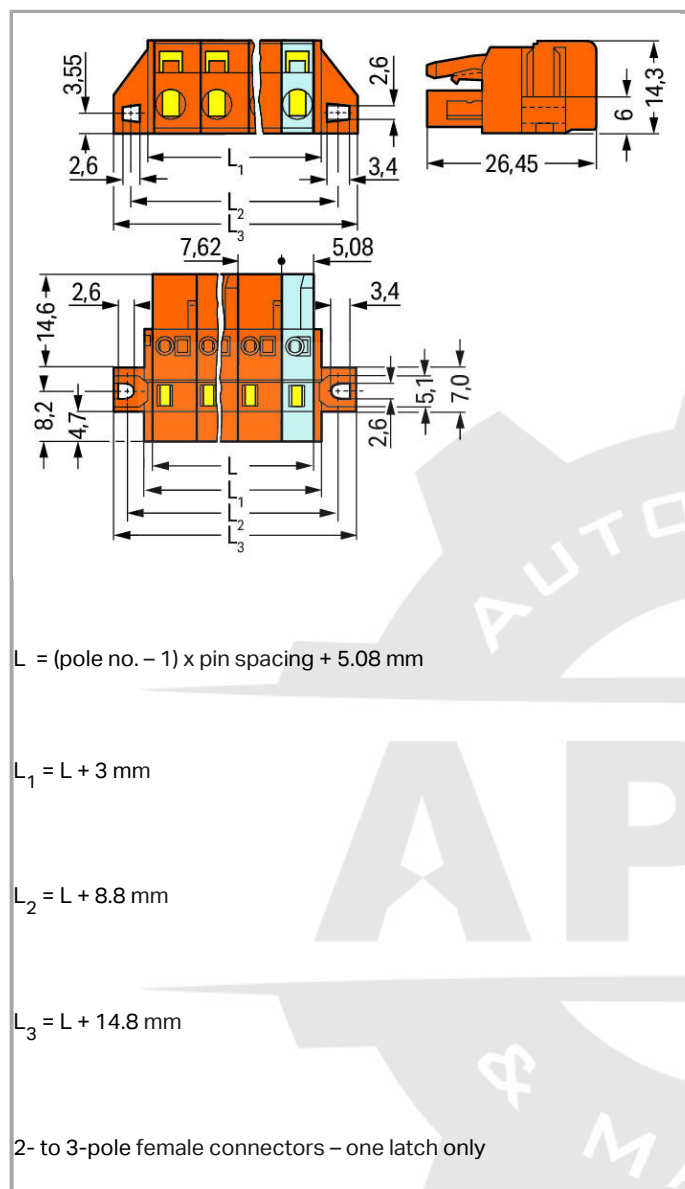
### Derating Curve

1-conductor female connector (231-202/026-000) with  
THT male header (231-832/001-000)

Pin spacing: 7.5 mm / Conductor cross-section: 2.5 mm<sup>2</sup> "f-st"

Based on: EN 60512-5-2 / Reduction factor: 0.8





### 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)         | 500 V  |
| Rated impulse voltage (III / 3) | 6 kV   |
| Rated voltage (III / 2)         | 630 V  |
| Rated impulse voltage (III / 2) | 6 kV   |
| Rated voltage (II / 2)          | 1000 V |
| Rated impulse voltage (II / 2)  | 6 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 mm² / 28 ... 12 AWG |
| Fine-stranded conductor                                     | 0.08 ... 2.5 mm² / 28 ... 12 AWG |
| Fine-stranded conductor with ferrule with plastic collar    | 0.25 ... 1.5 mm²                 |
| Fine-stranded conductor with ferrule without plastic collar | 0.25 ... 2.5 mm²                 |
| Strip length                                                | 8 ... 9 mm / 0.31 ... 0.35 inch  |
| No. of poles                                                | 7                                |
| Total number of connection points                           | 7                                |
| Total number of potentials                                  | 7                                |

|                                               |    |
|-----------------------------------------------|----|
| Number of connection types                    | 1  |
| Number of levels                              | 1  |
| Conductor entry direction to mating direction | 0° |

## Geometrical Data

|             |                       |
|-------------|-----------------------|
| Pin spacing | 7.62 mm / 0.3 inch    |
| Width       | 65.6 mm / 2.583 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<br>Panel mounting |

## Plug connection

|                                    |                         |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| 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            | Copper alloy                      |
| Contact plating             | tin-plated                        |
| Fire load                   | 0.263 MJ                          |
| Weight                      | 15.399 g                          |

## Environmental Requirements

|                         |                |
|-------------------------|----------------|
| Limit temperature range | -60 ... +85 °C |
|-------------------------|----------------|

## Commercial data

|                    |                        |
|--------------------|------------------------|
| Product Group      | 3 (Multi Conn. System) |
| Country of origin  | DE                     |
| GTIN               | 4044918376662          |
| Customs Tariff No. | 85366990990            |

## Approvals / Certificates

### Country specific Approvals

| Logo | Approval                       | Additional Approval Text | Certificate name |
|------|--------------------------------|--------------------------|------------------|
|      | CB<br>DEKRA Certification B.V. | IEC 61984                | NL-39756         |

### UL-Approvals

| Logo                                                                             | Approval                             | Additional Approval Text | Certificate name |
|----------------------------------------------------------------------------------|--------------------------------------|--------------------------|------------------|
|  | UR<br>Underwriters Laboratories Inc. | UL 1977                  | E45171           |
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | E45172           |

## Compatible products

### General accessories

|                                                                                    |                                                                       |         |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------|
|  | Item no.: 231-669<br>Lockout caps; for covering unused clamping units | 231-669 |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------|

### Insulation stop

|                                                                                    |                                                                  |         |
|------------------------------------------------------------------------------------|------------------------------------------------------------------|---------|
|  | Item no.: 231-673<br>Insulation stop; 0.08-0.2 mm² / 0.2 mm² "s" | 231-673 |
|  | Item no.: 231-674<br>Insulation stop; 0.25 - 0.5 mm²             | 231-674 |
|  | Item no.: 231-675<br>Insulation stop; 0.75 - 1 mm²               | 231-675 |

### check

|                                                                                    |                                                             |         |
|------------------------------------------------------------------------------------|-------------------------------------------------------------|---------|
|  | Item no.: 210-136<br>Test plug; 2 mm Ø; with 500 mm cable   | 210-136 |
|  | Item no.: 210-137<br>Test plug; 2.3 mm Ø; with 500 mm cable | 210-137 |



**Item no.: 231-662**  
 Test plugs for female connectors; for 7.5 mm and 7.62 mm pin spacing

231-662

#### Strain relief plate



**Item no.: 232-687**  
 Strain relief housing

232-687

#### Marking accessories

**Item no.: 210-331/762-202**

Marking strips; as a DIN A4 sheet; MARKED; 1-16 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive

1162-202

210-331

**Item no.: 210-332/762-020**

Marking strips; as a DIN A4 sheet; MARKED; 1-20 (80x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive

1162-020

210-332

#### tools



**Item no.: 210-657**  
 Operating tool with partially insulated shaft; Blade (3.5 x 0.5) mm; short

210-657



**Item no.: 210-720**  
 Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm

210-720



**Item no.: 231-131**  
 Push-button; for female and male connectors; loose

231-131



**Item no.: 231-159**  
 Operating tool; for male and female connectors with CAGE CLAMP®; of Series 231, 232, 721, 722, 723, 731, 732

231-159



**Item no.: 231-231**  
 Combination operating tool; for male and female connectors with CAGE CLAMP®

231-231



**Item no.: 231-291**  
 Operating tool; for male and female connectors with CAGE CLAMP®; loose

231-291

#### 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 mm² / AWG 18; uninsulated; electro-tin plated                                                                                                        | 216-123 |
|    | <b>Item no.: 216-124</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated                                                                          | 216-124 |
|    | <b>Item no.: 216-131</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated                                                                         | 216-131 |
|    | <b>Item no.: 216-132</b><br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated                                                                         | 216-132 |
|    | <b>Item no.: 216-141</b><br>Ferrule; Sleeve for 0.5 mm² / 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><br>Ferrule; Sleeve for 0.75 mm² / 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><br>Ferrule; Sleeve for 1 mm² / 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><br>Ferrule; Sleeve for 1.5 mm² / 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><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated                                                                         | 216-151 |
|   | <b>Item no.: 216-152</b><br>Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated                                                                         | 216-152 |
|  | <b>Item no.: 216-201</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated                                                                            | 216-201 |
|  | <b>Item no.: 216-202</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated                                                                           | 216-202 |
|  | <b>Item no.: 216-203</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated                                                                              | 216-203 |
|  | <b>Item no.: 216-204</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated                                                                            | 216-204 |
|  | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated                                                                            | 216-221 |
|  | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated                                                                           | 216-222 |
|  | <b>Item no.: 216-223</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated                                                                              | 216-223 |
|  | <b>Item no.: 216-224</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated                                                                            | 216-224 |
|  | <b>Item no.: 216-241</b><br>Ferrule; Sleeve for 0.5 mm² / 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><br>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><br>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><br>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><br>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><br>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><br>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><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated                                                                         | 216-301 |
|   | <b>Item no.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated                                                                         | 216-302 |
|                                                                                    | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated                                                                         | 216-321 |
|   | <b>Item no.: 216-322</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated                                                                         | 216-322 |
| <b>assembling</b>                                                                  |                                                                                                                                                                                      |         |
|  | <b>Item no.: 209-147</b><br>Self-tapping screw                                                                                                                                       | 209-147 |
|  | <b>Item no.: 231-194</b><br>Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø                                                                                                       | 231-194 |
|  | <b>Item no.: 231-195</b><br>Screw with nut; M2x12; for fixing element                                                                                                                | 231-195 |
|  | <b>Item no.: 231-295</b><br>Screw with nut                                                                                                                                           | 231-295 |

## Downloads

## CAD/CAE - Smart Data

## CAD data

|                             |     |          |
|-----------------------------|-----|----------|
| 3D Download 231-707/031-000 | URL | Download |
|-----------------------------|-----|----------|



Subject to changes.

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