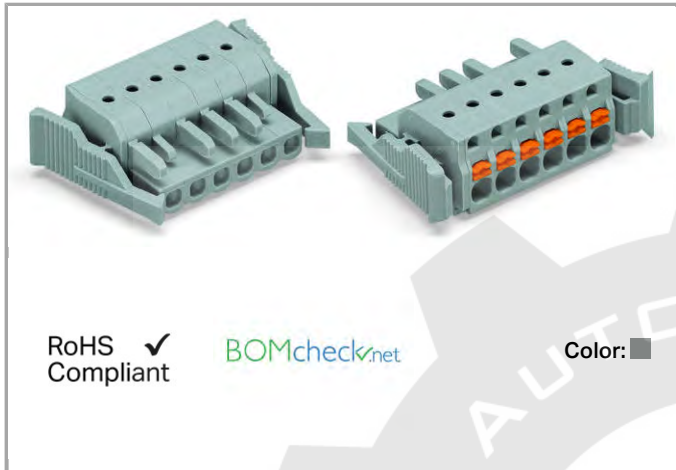


# Data sheet | Item number: 2231-110/037-000

1-conductor female plug; push-button; Locking lever; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 10-pole; 2,50 mm<sup>2</sup>; gray



2231-110\_037-000



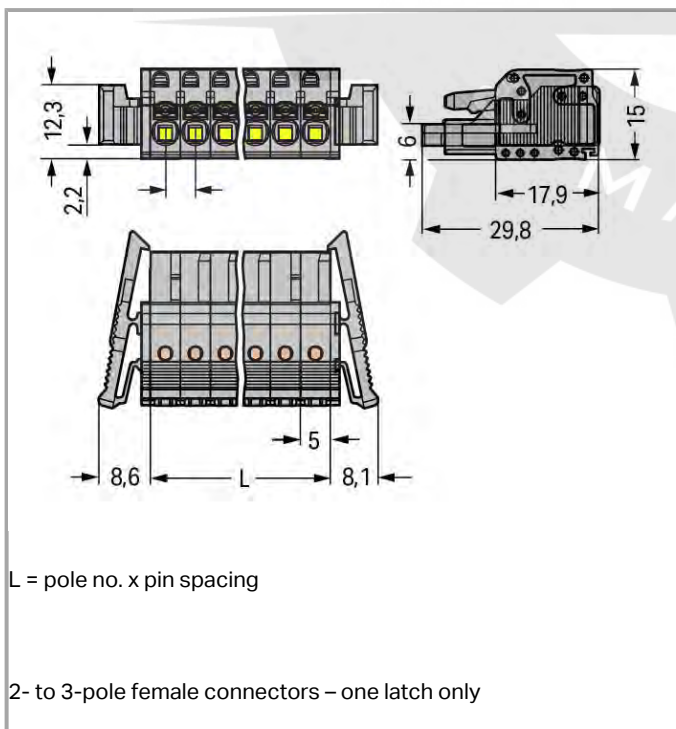
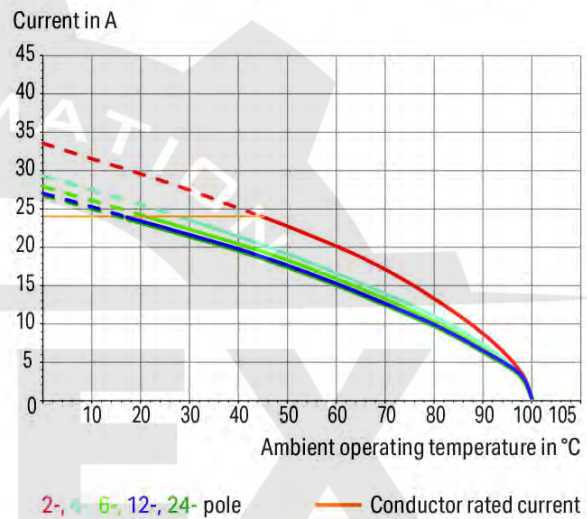
RoHS  
Compliant

BOMcheck.net

Color: ■

## Derating Curve

1-conductor female connector (2231-102/026-000) with  
THT male header (231-162/001-000)  
Pin spacing: 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-to-use design does not require specialty tools
- Ability to wire while mated
- Push-in termination of solid and ferruled conductors
- Integrated test ports for testing parallel to the conductor entry
- 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 C) | 150 V |
| Rated current UL (Use Group C) | 15 A  |
| Rated voltage UL (Use Group D) | 300 V |

#### 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 C) | 150 V |
| Rated current CSA (Use Group C) | 15 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 10 A  |

## Connection data

|                                                             |                     |              |           |
|-------------------------------------------------------------|---------------------|--------------|-----------|
| Connection technology                                       | Push-in CAGE CLAMP® |              |           |
| Actuation type                                              | Push-button         |              |           |
| Solid conductor                                             | 0.2                 | 2.5 mm² / 24 | 12 AWG    |
| Fine-stranded conductor                                     | 0.2                 | 2.5 mm² / 24 | 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                                                | 10                  | 11 mm / 0.39 | 0.43 inch |
| Total number of connection points                           | 10                  |              |           |
| Total number of potentials                                  | 10                  |              |           |
| Number of connection types                                  | 1                   |              |           |
| Number of levels                                            | 1                   |              |           |
| Conductor entry direction to mating direction               | 0°                  |              |           |
| No. of poles                                                | 10                  |              |           |

## Geometrical Data

|             |                      |
|-------------|----------------------|
| Pin spacing | 5 mm / 0.197 inch    |
| Width       | 66.7 mm / 2.626 inch |
| Height      | 15 mm / 0.591 inch   |
| Depth       | 29.8 mm / 1.173 inch |

## Plug connection

|                                    |                         |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector connection type          | for conductors          |
| Mismating protection               | No                      |
| Locking of plug-in connection      | locking lever           |

## 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 | 0.37 MJ  |
| Weight    | 17.263 g |

## Environmental Requirements

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

## Commercial data

|                    |                        |
|--------------------|------------------------|
| Product Group      | 3 (Multi Conn. System) |
| Country of origin  | PL                     |
| GTIN               | 4045454877392          |
| Customs Tariff No. | 85366990990            |

## Approvals / Certificates

### Radio-Approvals

| Logo                                                                               | Approval                              | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|---------------------------------------|--------------------------|------------------|
|                                                                                    | CB<br>DEKRA Certification B.V.        | IEC 61984                | NL-39756         |
|   | CSA<br>DEKRA Certification B.V.       | C22.2 No. 158            | 2314554          |
|  | KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984                 | 2190761.01       |

### Country specific Approvals

| Logo                                                                               | Approval                              | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|---------------------------------------|--------------------------|------------------|
|                                                                                    | CB<br>DEKRA Certification B.V.        | IEC 61984                | NL-39756         |
|  | CSA<br>DEKRA Certification B.V.       | C22.2 No. 158            | 2314554          |
|  | KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984                 | 2190761.01       |

### Other Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|------|----------|--------------------------|------------------|
|      | UL       | UL 1059                  | E45172           |



Underwriters Laboratories Inc.



UR  
 UL International Germany GmbH

UL 1977

E45171

## UL-Approvals

| Logo                                                                             | Approval                             | Additional Approval Text | Certificate name |
|----------------------------------------------------------------------------------|--------------------------------------|--------------------------|------------------|
|  | UL<br>Underwriters Laboratories Inc. | UL 1059                  | E45172-19911118  |
|  | UR<br>UL International Germany GmbH  | UL 1977                  | E45171           |

## Compatible products

### ferrule

|                                                                                    |                                                                                                         |         |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------|
|  | Item no.: 216-101<br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated  | 216-101 |
|  | Item no.: 216-102<br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated | 216-102 |
|  | Item no.: 216-103<br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated    | 216-103 |
|  | Item no.: 216-104<br>Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated  | 216-104 |
|  | Item no.: 216-106<br>Ferrule; Sleeve for 2.5 mm <sup>2</sup> / AWG 14; uninsulated; electro-tin plated  | 216-106 |
|  | Item no.: 216-121<br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated  | 216-121 |
|  | Item no.: 216-122<br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated | 216-122 |
|                                                                                    | Item no.: 216-123<br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated    | 216-123 |

**Item no.: 216-124**Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; uninsulated; electro-tin plated

216-124

**Item no.: 216-131**Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

216-131

**Item no.: 216-132**Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

216-132

**Item no.: 216-141**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

**Item no.: 216-142**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

**Item no.: 216-143**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

**Item no.: 216-144**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

**Item no.: 216-151**Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

216-151

**Item no.: 216-152**Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

216-152

**Item no.: 216-201**Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

216-201

**Item no.: 216-202**Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

216-202

**Item no.: 216-203**Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

216-203

**Item no.: 216-204**Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

216-204

**Item no.: 216-221**Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

216-221

**Item no.: 216-222**Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

216-222

**Item no.: 216-223**Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

216-223

**Item no.: 216-224**Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black

216-224

**Item no.: 216-241**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

216-241

**Item no.: 216-242**

|                                                                                    |                                                                                                                                                                                         |                     |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|     | Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray                                      | 216-242             |
|     | <b>Item no.: 216-243</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red              | 216-243             |
|     | <b>Item no.: 216-244</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black          | 216-244             |
|     | <b>Item no.: 216-262</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray          | 216-262             |
|     | <b>Item no.: 216-263</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red              | 216-263             |
|     | <b>Item no.: 216-264</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black          | 216-264             |
|     | <b>Item no.: 216-284</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black          | 216-284             |
|                                                                                    | <b>Item no.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow                                                                                | 216-301             |
|   | <b>Item no.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green                                                                                 | 216-302             |
|                                                                                    | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow                                                                                | 216-321             |
|   | <b>Item no.: 216-322</b><br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green                                                                                 | 216-322             |
| <b>Strain relief plate</b>                                                         |                                                                                                                                                                                         |                     |
|  | <b>Item no.: 734-326</b><br>Strain relief plate; gray                                                                                                                                   | 734-326             |
| <b>tools</b>                                                                       |                                                                                                                                                                                         |                     |
|  | <b>Item no.: 210-657</b><br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short                                                                                | 210-657             |
|  | <b>Item no.: 210-720</b><br>Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft                                                                                       | 210-720             |
| <b>Insulation stop</b>                                                             |                                                                                                                                                                                         |                     |
|  | <b>Item no.: 231-671</b><br>Insulation stop; 0.25 - 0.5 mm²; light gray                                                                                                                 | 231-671             |
|  | <b>Item no.: 231-672</b><br>Insulation stop; 0.75 - 1 mm²; dark gray                                                                                                                    | 231-672             |
| <b>Marking accessories</b>                                                         |                                                                                                                                                                                         |                     |
|                                                                                    | <b>Item no.: 210-332/500-202</b><br>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 | 210-332<br>/500-202 |



|                                                                                  |                                                                                                                                                                                          |                     |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                                                                                  | <b>Item no.: 210-332/500-204</b><br>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 | 210-332<br>/500-204 |
|                                                                                  | <b>Item no.: 210-332/500-205</b><br>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   | 210-332<br>/500-205 |
|                                                                                  | <b>Item no.: 210-332/500-206</b><br>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 | 210-332<br>/500-206 |
|  | <b>Item no.: 210-833</b><br>Marking strips; on reel; 6 mm wide; plain; Self-adhesive; white                                                                                              | 210-833             |
|  | <b>Item no.: 210-834</b><br>Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white                                                                                              | 210-834             |
| <b>check</b>                                                                     |                                                                                                                                                                                          |                     |
|  | <b>Item no.: 210-136</b><br>Test plug; 2 mm Ø; with 500 mm cable; red                                                                                                                    | 210-136             |
|  | <b>Item no.: 231-661</b><br>Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm <sup>2</sup> ; light gray                                                        | 231-661             |

## Downloads

## Documentation

## Additional Information

Technical explanations

Apr 3, 2019

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## CAD/CAE - Smart Data

## CAD data

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