

Data Sheet | Item Number: 231-111/125-000

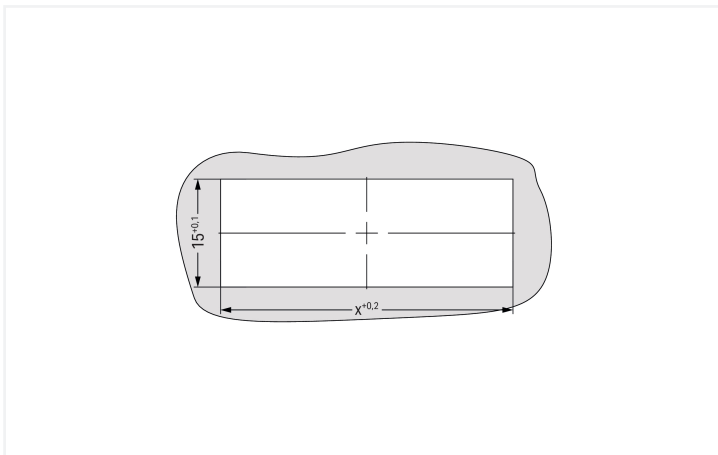
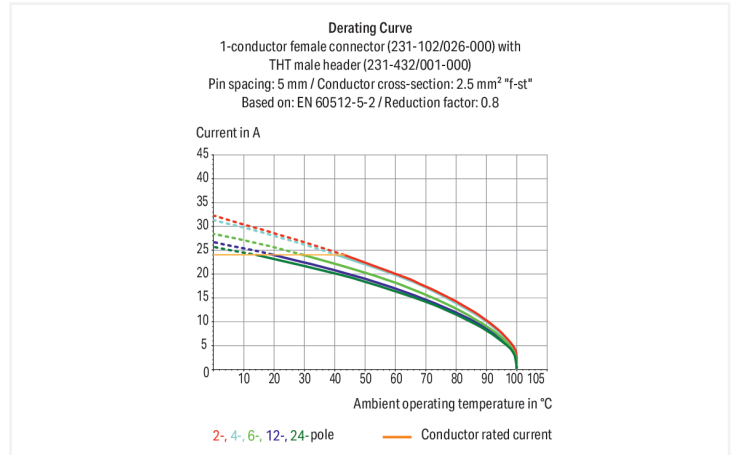
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 11-pole; Snap-in flange; gray

<https://www.wago.com/231-111/125-000>

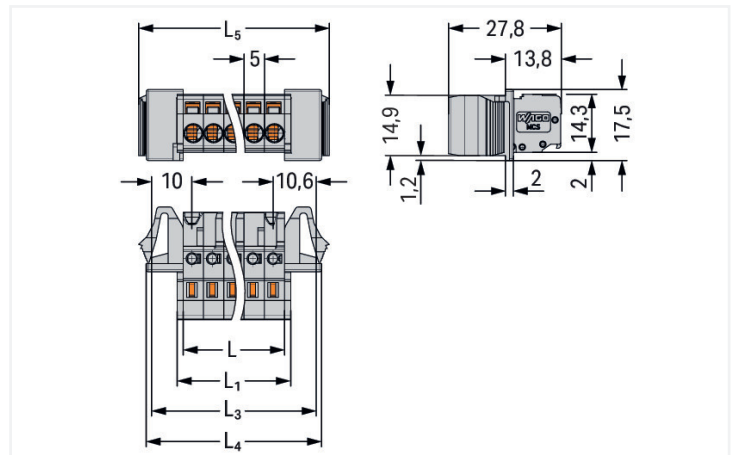


Color: ■ gray

Similar to illustration



$X = (\text{pole no.} \times \text{pin spacing}) + 15.8 \text{ mm}$ for 0.5 ... 3 mm plate thickness



$L = \text{pole no.} \times \text{pin spacing}$ $L1 = (\text{pole no.} \times \text{pin spacing}) + 3 \text{ mm}$ $L3 = (\text{pole no.} \times \text{pin spacing}) + 15.6 \text{ mm}$ $L4 = (\text{pole no.} \times \text{pin spacing}) + 18.2 \text{ mm}$ $L5 = (\text{pole no.} \times \text{pin spacing}) + 22 \text{ mm}$ 2- to 5-pole female connectors – without reinforcing strips

Female connector, 231 Series, operating tool

Enjoy seamless electrical installations with this female connector (item number 231-111/125-000). Conductors can only be connected to this female connector if their strip length is between 8 and 9 mm. This product features one conductor terminal and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection offers a secure and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. The item's dimensions are (77 x 14.3 x 26.45) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². The contact surface is coated with tin.

Notes

Safety Information

The MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected/disconnected when live or under load. When used as intended, these connectors must 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.

Variants:

Gold-plated or partially gold-plated contact surfaces
Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

Electrical data

Ratings per IEC/EN

| Ratings per | IEC/EN 60664-1 |
|---|--|
| Nominal voltage (III/3) | 320 V |
| Rated impulse withstand voltage (III / 3) | 4 kV |
| Rated voltage (III/2) | 320 V |
| Rated impulse withstand voltage (III/2) | 4 kV |
| Nominal voltage (II/2) | 630 V |
| Rated impulse withstand voltage (II/2) | 4 kV |
| Rated current | 16 A |
| Legend (ratings) | (III / 2) \triangleq Overvoltage category III / Pollution degree 2 |

Ratings per UL

| 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 |

Ratings per UL 1977

| | |
|-------------------------|-------|
| Rated voltage (UL 1977) | 600 V |
| Rated current UL 1977 | 15 A |

Ratings per CSA

| 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

| | |
|----------------------------|----|
| Clamping units | 11 |
| Total number of potentials | 11 |
| Number of connection types | 1 |
| Number of levels | 1 |

Connection 1

| | |
|---|--|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Actuation direction 1 | Operation parallel to conductor entry |
| Actuation direction 2 | Operation perpendicular to conductor entry |
| Solid conductor | 0.08 ... 2.5 mm ² / 28 ... 12 AWG |
| Fine-stranded conductor | 0.08 ... 2.5 mm ² / 28 ... 12 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 ... 1.5 mm ² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm ² |
| Strip length | 8 ... 9 mm / 0.31 ... 0.35 inches |
| Pole number | 11 |
| Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|-------------------------|
| Pin spacing | 5 mm / 0.197 inches |
| Width | 77 mm / 3.031 inches |
| Height | 14.3 mm / 0.563 inches |
| Depth | 26.45 mm / 1.041 inches |

Mechanical data

| | |
|--------------------------|--------------------------------------|
| Variable coding | Yes |
| Housing sheet thickness | 0.5 ... 3 mm / 0.02 ... 0.118 inches |
| Mounting type | Snap-in flange |
| Mounting type | Feed-through mounting |
| Anti-rotation protection | Yes |

Plug-in connection

| | |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type) | for conductor |
| Mismating protection | No |

Material data

| | |
|------------------------------------|--|
| Note (material data) | Information on material specifications can be found here |
| Color | gray |
| Material group | I |
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome-nickel spring steel (CrNi) |
| Contact material | Copper alloy |
| Contact Plating | Tin |
| Fire load | 0.352 MJ |
| Weight | 22.3 g |

Environmental requirements

| | |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +100 °C |
| Processing temperature | -35 ... +60 °C |

Commercial data

| | |
|-----------------------|---------------|
| PU (SPU) | 25 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4066966277111 |
| Customs tariff number | 85366990990 |

Product Classification

| | |
|-----------|----------------------|
| UNSPSC | 39121409 |
| ETIM 9.0 | EC002638 |
| ETIM 10.0 | EC002638 |
| ECCN | NO US CLASSIFICATION |

Environmental Product Compliance

| | |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---------------------------------|-----------|------------------|
| CB DEKRA Certification B.V. | IEC 61984 | NL-113351 |
| CSA DEKRA Certification B.V. | C22.2 | 1466354 |

Downloads

Environmental Product Compliance

| | |
|---|-------------------|
| Compliance Search | |
| Environmental Product Compliance 231-111/125-000 | ↓ |

Documentation

| | | | |
|-------------------------------|------------|-------------------|-------------------|
| Additional Information | | | |
| Technical Section | 03.04.2019 | pdf 2027.26 KB | ↓ |

CAD/CAE-Data

| | |
|---------------------------------|-------------------|
| CAD data | |
| 2D/3D Models 231-111/125-000 | ↓ |

| | |
|--|-------------------|
| PCB Design | |
| Symbol and Footprint via SamacSys 231-111/125-000 | ↓ |
| Symbol and Footprint via Ultra Librarian 231-111/125-000 | ↓ |

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



Item No.: 231-611

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 11-pole; gray

Item No.: 231-441/001-000

THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 5 mm; 11-pole; gray

Item No.: 231-141/001-000

THT male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 5 mm; 11-pole; gray

1.2 Optional Accessories

1.2.1 Cover

1.2.1.1 Cover



Item No.: 231-668

Lockout caps; for covering unused clamping units; gray

1.2.2 Ferrule

1.2.2.1 Ferrule



Item No.: 216-301

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-302

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-201

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white



Item No.: 216-241

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white



Item No.: 216-141

Ferrule; Sleeve for 0.5 mm² / 20 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



Item No.: 216-101

Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; electro-tin plated; silver-colored



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



Item No.: 216-262

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



Item No.: 216-202

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-142

Ferrule; Sleeve for 0.75 mm² / 18 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



Item No.: 216-102

Ferrule; Sleeve for 0.75 mm² / AWG 20; un-insulated; electro-tin plated; silver-colored



Item No.: 216-243

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



Item No.: 216-263

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



Item No.: 216-203

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-103

Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated



Item No.: 216-143

Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



Item No.: 216-204

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



Item No.: 216-244

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



Item No.: 216-264

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



Item No.: 216-284

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

1.2.2.1 Ferrule



Item No.: 216-144

Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored

Item No.: 216-104

Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; silver-colored

Item No.: 216-106

Ferrule; Sleeve for 2.5 mm² / AWG 14; un-insulated; electro-tin plated; silver-colored

1.2.3 Insulation stop

1.2.3.1 Insulation stop



Item No.: 231-670

Insulation stop; 0.08-0.2 mm² / 0.2 mm² "s"; white

Item No.: 231-671

Insulation stop; 0.25 - 0.5 mm²; light gray

Item No.: 231-672

Insulation stop; 0.75 - 1 mm²; dark gray

1.2.4 Jumper

1.2.4.1 Jumper



Item No.: 231-910

Jumper; for conductor entry; 10-way; insulated; gray

Item No.: 231-902

Jumper; for conductor entry; 2-way; insulated; gray

Item No.: 231-903

Jumper; for conductor entry; 3-way; insulated; gray

Item No.: 231-905

Jumper; for conductor entry; 5-way; insulated; gray



Item No.: 231-907

Jumper; for conductor entry; 7-way; insulated; gray

1.2.5 Marking

1.2.5.1 Marking strip



Item No.: 210-331/500-103

Marking strips; as a DIN A4 sheet; MARKED; 1-12 (300x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

Item No.: 210-332/500-202

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

Item No.: 210-332/500-205

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

Item No.: 210-331/500-104

Marking strips; as a DIN A4 sheet; MARKED; 13-24 (300x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-332/500-204

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

Item No.: 210-332/500-206

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

1.2.6 Test and measurement

1.2.6.1 Testing accessories



Item No.: 210-136

Test plug; 2 mm Ø; with 500 mm cable; red

Item No.: 231-661

Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm²; light gray

1.2.7 Tool

1.2.7.1 Operating tool



Item No.: 231-231

Combination operating tool; red



Item No.: 209-132

Operating tool; for connecting comb-style jumper bar; made of insulating material; 2-way; natural



Item No.: 280-440

Operating tool; made of insulating material; 10-way; white



Item No.: 209-130

Operating tool; made of insulating material; 1-way; for 264 Series (1-1/2-way), 280, 281 Series (up to 3-way); natural



Item No.: 231-291

Operating tool; made of insulating material; 1-way; loose; red



Item No.: 231-131

Operating tool; made of insulating material; 1-way; loose; white



Item No.: 280-432

Operating tool; made of insulating material; 2-way; white



Item No.: 280-433

Operating tool; made of insulating material; 3-way; white



Item No.: 280-434

Operating tool; made of insulating material; 4-way; white



Item No.: 280-435

Operating tool; made of insulating material; 5-way; gray



Item No.: 280-436

Operating tool; made of insulating material; 6-way; white



Item No.: 280-437

Operating tool; made of insulating material; 7-way; white



Item No.: 280-438

Operating tool; made of insulating material; 8-way; white

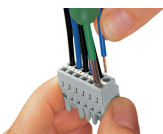


Item No.: 231-159

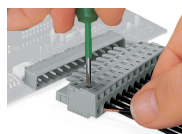
Operating tool; natural

Installation Notes

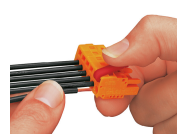
Conductor termination



Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation parallel to conductor entry.



Inserting a conductor via 3.5 mm screwdriver – CAGE CLAMP® actuation perpendicular to conductor entry.



Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).



Inserting a conductor via operating tool.

Coding



Coding a female connector by removing coding finger(s).

Testing



Testing – female connector with CAGE CLAMP®
Integrated test ports for testing perpendicular to conductor entry via 2 or 2.3 mm Ø test plug

Installation

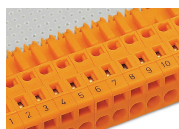


Male connector with strain relief plate



Strain relief housing shown with a male connector equipped with CAGE CLAMP®

Marking



Labeling via direct marking or self-adhesive strips.