

Data sheet | Item number: 231-216/031-000

Female plug; 16-pole; mounting flange; 12 AWG max; pin spacing 7.5 mm; 1 conductor per pole; gray



www.wago.com/231-216_031-000



i Picture differs from the item.

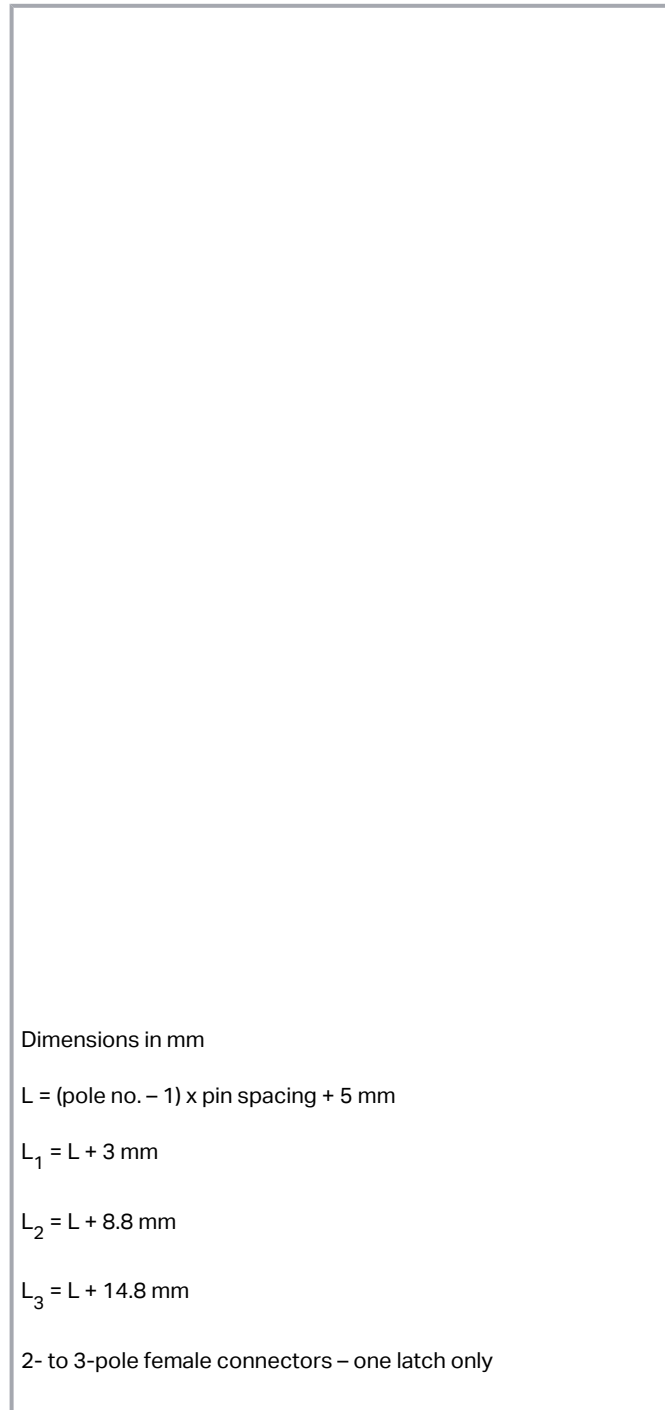
Color:



Subject to changes. Please also observe the further product documentation!

WAGO Corporation
Germantown, WI 53022
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222
Email: info.us@wago.com | Web: www.wago.us

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 5 \text{ mm}$

$L_1 = L + 3 \text{ mm}$

$L_2 = L + 8.8 \text{ mm}$

$L_3 = L + 14.8 \text{ mm}$

2- to 3-pole female connectors – one latch only

Item description

- Universal connection for all conductor types

Subject to changes. Please also observe the further product documentation!

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- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation
- Integrated test ports
- With coding fingers

Data

Notes

Safety information 1

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. 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

IEC Approvals

| Ratings per | IEC/EN 60664-1 |
|-----------------------------|---|
| Rated voltage (III / 3) | 500 V |
| Rated surge voltage (III/3) | 6 kV |
| Rated voltage (III/2) | 630 V |
| Rated surge voltage (III/2) | 6 kV |
| Nominal voltage (II/2) | 1000 V |
| Rated surge voltage (II/2) | 6 kV |
| Rated current | 16 A |
| Legend (ratings) | (III / 2) ≙ Overvoltage category III / Pollution degree 2 |

UL Approvals

| 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 |

Subject to changes. Please also observe the further product documentation!

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Ratings per UL

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

CSA Approvals

| | |
|---------------------------------|-------|
| 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

| | |
|-----------------------------------|----|
| Total number of connection points | 16 |
| Total number of potentials | 16 |
| Number of connection types | 1 |
| Number of levels | 1 |

Connection 1

| | |
|---|--|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| 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 inch |
| Number of poles | 16 |
| Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|-----------------------|
| Pin spacing | 7.5 mm / 0.295 inch |
| Width | 127.3 mm / 5.012 inch |
| Height | 14.3 mm / 0.563 inch |
| Depth | 26.45 mm / 1.041 inch |

Subject to changes. Please also observe the further product documentation!



Mechanical data

| | |
|---------------|---|
| Mounting type | Mounting flange |
| Mounting type | Feed-through mounting Panel mounting |

Plug-in connection

| | |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type) | for conductor |
| Mismating protection | No |
| Locking of plug-in connection | Without |

Material data

| | |
|-----------------------------|-----------------------------------|
| Color | gray |
| Material group | I |
| Insulation material | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome nickel spring steel (CrNi) |
| Contact material | Copper alloy |
| Contact plating | tin-plated |
| Fire load | 0.575 MJ |
| Weight | 34.1 g |

Environmental requirements

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

Commercial data

| | |
|-----------------------|------------------------|
| Product Group | 3 (Multi Conn. System) |
| PU (SPU) | 10 Stück |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4044918367608 |
| Customs tariff number | 8536694040 |



Approvals / Certificates

Country specific Approvals



Subject to changes. Please also observe the further product documentation!

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| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
| | CB DEKRA Certification B.V. | IEC 61984 | NL-39756 |
|  | CSA DEKRA Certification B.V. | C22.2 | 1466354 |
|  | KEMA/KEUR DEKRA Certification B.V. | EN 61984 | 2190761.01 |

Ship Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|--|---|--------------------------|--------------------------|
|  | ABS American Bureau of Shipping | - | 19- HG1869876- PDA |
|  | BV Bureau Veritas S.A. | IEC 60998 | 11915/DO BV |
| | DNV GL Det Norske Veritas, Germanischer Lloyd | - | TAE000016Z |

UL-Approvals

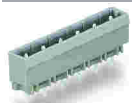
| Logo | Approval | Additional Approval Text | Certificate name |
|--|---|--------------------------|------------------|
|  | UR Underwriters Laboratories Inc. | UL 1059 | E45172 |
|  | UR Underwriters Laboratories Inc. | UL 1977 | E 45171 |

Subject to changes. Please also observe the further product documentation!

Counterpart


Item no.731-616

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 16-pole; 2,50 mm²; gray www.wago.com/731-616


Item no.231-246/001-000

Male header; 16-pole; THT; 1.0 x 1.0 mm solder pin; straight; pin spacing 7.5 mm; gray www.wago.com/231-246/001-000


Item no.231-846/001-000

THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.5 mm; 16-pole; gray www.wago.com/231-846/001-000

Optional accessories

Cover

Cover


Item no.: 231-668

Lockout caps; for covering unused clamping units; gray www.wago.com/231-668

Marking accessories

Marking strip

Item no.: 210-331/750-202

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; white www.wago.com/210-331/750-202

Item no.: 210-332/750-020

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; white www.wago.com/210-332/750-020

Ferrules

Ferrule

Item no.: 216-101

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored www.wago.com/216-101

Item no.: 216-104

Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored www.wago.com/216-104

Item no.: 216-106

Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated; silver-colored www.wago.com/216-106

Item no.: 216-102

Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored www.wago.com/216-102

Item no.: 216-103

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated www.wago.com/216-103

Subject to changes. Please also observe the further product documentation!



| | |
|---|--|
| Item no.: 216-123 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-123 |
| Item no.: 216-122 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-122 |
| Item no.: 216-124 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated | www.wago.com/216-124 |
| Item no.: 216-142 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | www.wago.com/216-142 |
| Item no.: 216-132 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-132 |
| Item no.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-121 |
| Item no.: 216-143 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | www.wago.com/216-143 |
| Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-131 |
| Item no.: 216-141 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | www.wago.com/216-141 |
| Item no.: 216-152 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-152 |
| Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-203 |
| Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-202 |
| Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-151 |
| Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-204 |
| Item no.: 216-144 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored | www.wago.com/216-144 |
| Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-201 |
| Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-223 |
| Item no.: 216-241 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight | www.wago.com/216-241 |



Subject to changes. Please also observe the further product documentation!

crimped; acc. to DIN 46228, Part 4/09.90; white


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|  | Item no.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | www.wago.com/216-242 |
|  | Item no.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-222 |
|  | Item no.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-221 |
|  | Item no.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-224 |
|  | Item no.: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red | www.wago.com/216-243 |
|  | Item no.: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | www.wago.com/216-244 |
|  | Item no.: 216-263 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red | www.wago.com/216-263 |
|  | Item no.: 216-264 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | www.wago.com/216-264 |
|  | Item no.: 216-284 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | www.wago.com/216-284 |
|  | Item no.: 216-262 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | www.wago.com/216-262 |
|  | Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-301 |
|  | Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-321 |
|  | Item no.: 216-322 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; green | www.wago.com/216-322 |
|  | Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise | www.wago.com/216-302 |


Tools


Operating tool


| | | |
|---|---|--|
|  | Item no.: 231-159 Operating tool; natural | www.wago.com/231-159 |
|  | Item no.: 231-231 Combination operating tool; red | www.wago.com/231-231 |

Subject to changes. Please also observe the further product documentation!

| | | |
|--|---|--|
|  | Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured | www.wago.com/210-657 |
|--|---|--|

| | | |
|--|--|--|
|  | Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured | www.wago.com/210-720 |
|--|--|--|

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|  | Item no.: 231-131 Operating tool; made of insulating material; 1-way; loose; white | www.wago.com/231-131 |
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|  | Item no.: 231-291 Operating tool; made of insulating material; 1-way; loose; red | www.wago.com/231-291 |
|--|--|--|

Mounting

Mounting accessories

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|  | Item no.: 209-147 Self-tapping screw | www.wago.com/209-147 |
|--|--|--|


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|  | Item no.: 231-194 Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø | www.wago.com/231-194 |
|--|--|--|


| | | |
|--|---|--|
|  | Item no.: 231-195 Screw with nut; M2x12; for fixing element | www.wago.com/231-195 |
|--|---|--|


| | | |
|---|--|--|
|  | Item no.: 231-295 Screw with nut | www.wago.com/231-295 |
|---|--|--|

Insulations stops

Insulation stop


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|--|--|--|
|  | Item no.: 231-673 Insulation stop; 0.08-0.2 mm ² / 0.2 mm ² "s"; white | www.wago.com/231-673 |
|--|--|--|

| | | |
|--|--|--|
|  | Item no.: 231-674 Insulation stop; 0.25 - 0.5 mm ² ; light gray | www.wago.com/231-674 |
|--|--|--|

| | | |
|--|---|--|
|  | Item no.: 231-675 Insulation stop; 0.75 - 1 mm ² ; dark gray | www.wago.com/231-675 |
|--|---|--|

Testing accessories

Testing accessories

| | | |
|--|--|--|
|  | Item no.: 210-136 Test plug; 2 mm Ø; with 500 mm cable | www.wago.com/210-136 |
|--|--|--|

Item no.: 231-662

Subject to changes. Please also observe the further product documentation!



Test plugs for female connectors; for 7.5 mm and 7.62 mm pin spacing; 2,50 mm²; light gray

www.wago.com/231-662

Downloads

Documentation

Additional Information

| | | | |
|------------------------|------------|---------------|----------|
| Technical explanations | 2019 Apr 3 | pdf 2.0 MB | Download |
|------------------------|------------|---------------|----------|

CAD files

CAD data

| | | |
|------------------------------|-----|----------|
| 2D/3D Models 231-216/031-000 | URL | Download |
|------------------------------|-----|----------|

CAE data

| | | |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-216/031-000 | URL | Download |
|-----------------------------------|-----|----------|

| | | |
|------------------------------|-----|----------|
| ZUKEN Portal 231-216/031-000 | URL | Download |
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|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-216/031-000 | URL | Download |
|-----------------------------------|-----|----------|

Environmental Product Compliance

Compliance Search

| | | |
|--|-----|----------|
| Environmental Product Compliance 231-216/031-000 | URL | Download |
|--|-----|----------|

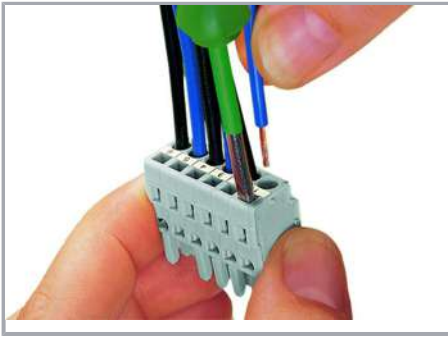
1-conductor female connector; CAGE CLAMP®; 2,5 mm²; Pin spacing 7.5 mm; 16-pole; clamping collar; 2,50 mm²; gray

Installation Notes

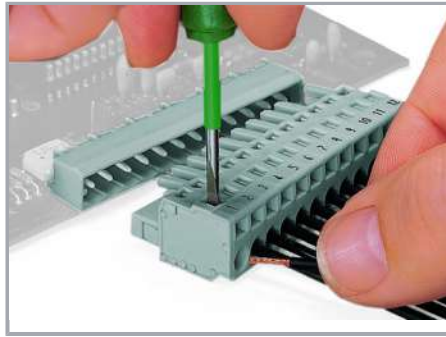
Subject to changes. Please also observe the further product documentation!

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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 lever (231-291).



Inserting a conductor via operating tool.



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

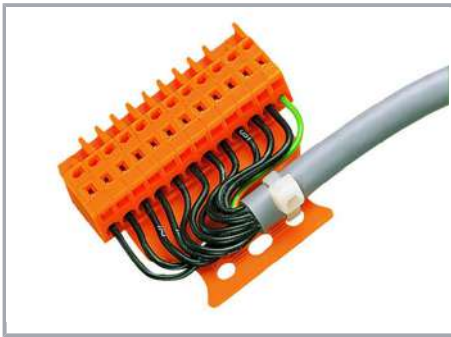
Subject to changes. Please also observe the further product documentation!



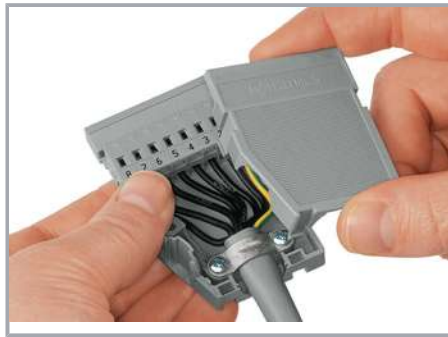
Testing – female connector with CAGE CLAMP®

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

Subject to changes. Please also observe the further product documentation!



Labeling via direct marking or self-adhesive strips.

Product family

MCS MIDI Classic

[Show all products from the family](#)

Subject to changes. Please also observe the further product documentation!