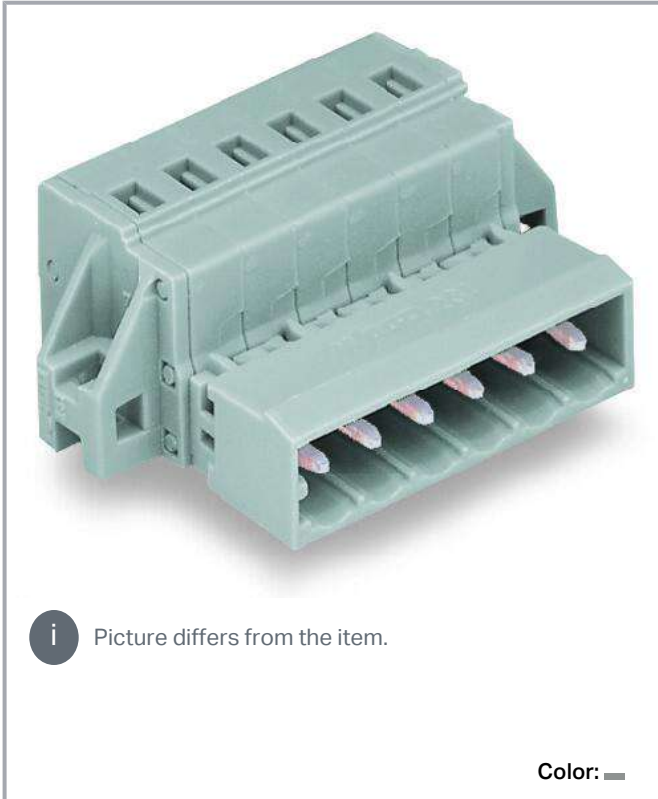


Data sheet | Item number: 231-620/019-000/035-000

Male connector; 20-pole; Pin spacing 5 mm; mounting flange; with strain relief plate; gray



www.wago.com/231-620_019-000_035-000



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

WAGO Corporation
Germantown, WI 53022
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Email: info.us@wago.com | Web: www.wago.us

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Dimensions in mm

$$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$$
$$L_3 = L - 0.2 \text{ mm}$$
$$L_4 = L_3 + 5.8 \text{ mm}$$
$$L_5 = L_3 + 11.8 \text{ mm}$$

Item description

- Universal connection for all conductor types
- Easy cable pre-assembly and on-unit wiring via vertical and horizontal CAGE CLAMP® actuation

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



- For wire-to-wire and board-to-wire connections
- Versions available with snap-in mounting feet or flanges for panel or through-panel mounting
- 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:

Other pole numbers
 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) | 320 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| Nominal voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |
| Rated current | 12 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 potentials | 20 |
| 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 | 20 |
| Conductor entry direction to mating direction | 0° |

Physical data

| | |
|-------------|----------------------|
| Pin spacing | 5 mm / 0.197 inch |
| Width | 114.8 mm / 4.52 inch |
| Height | 14.3 mm / 0.563 inch |
| Depth | 62.5 mm / 2.461 inch |

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

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Mechanical data

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

Plug-in connection

| | |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| 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 | Electrolytic copper (E _{Cu}) |
| Contact plating | tin-plated |
| Fire load | 0.618 MJ |
| Weight | 32.9 g |

Environmental requirements

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

Commercial data

| | |
|-----------------------|------------------------|
| Product Group | 3 (Multi Conn. System) |
| PU (SPU) | 10 Stück |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4044918280044 |
| Customs tariff number | 85366990990 |

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 |
|--|---------------------------------|--------------------------|------------------|
|  | CSA DEKRA Certification B.V. | C22.2 | 1466354 |




Ship Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|--------------------------|
|  | ABS American Bureau of Shipping | - | 19- HG1869876- PDA |
| | DNV GL Det Norske Veritas, Germanischer Lloyd | - | TAE000016Z |

UL-Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|---|--------------------------------------|--------------------------|------------------|
|  | UL Underwriters Laboratories Inc. | UL 1977 | E45171 |

Counterpart

| | | |
|--|--|--|
|  | Item no.231-120/026-000 Female plug; 20-pole; 12 AWG max; pin spacing 5 mm; 1 conductor per pole; gray | www.wago.com/231-120/026-000 |
|  | Item no.232-250 THT female header; angled; Pin spacing 5 mm; 20-pole; 0.6 x 1.0 mm solder pin; gray | www.wago.com/232-250 |
|  | Item no.232-150 THT female header; straight; Pin spacing 5 mm; 20-pole; 0.6 x 1.0 mm solder pin; gray | www.wago.com/232-150 |

Optional accessories

| Coding | | |
|--|--|--|
|  | Item no.: 231-129 Coding key; snap-on type; light gray | www.wago.com/231-129 |

Cover

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

Cover

**Item no.:** 231-668

Lockout caps; for covering unused clamping units; gray

www.wago.com/231-668

Mounting

Mounting accessories

**Item no.:** 209-147

Self-tapping screw

www.wago.com/209-147**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

Marking accessories

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

www.wago.com/210-331/500-103**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

www.wago.com/210-331/500-104**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

www.wago.com/210-332/500-202**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

www.wago.com/210-332/500-206**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

www.wago.com/210-332/500-205**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

www.wago.com/210-332/500-204

Tools

Operating tool

**Item no.:** 209-130

















Operating tool; suitable for 264, 280 and 281 Series; 1-way; of insulating material; white

www.wago.com/209-130**Item no.:** 209-132

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

www.wago.com/209-132

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

| | | |
|--|---|--|
|  | Item no.: 231-159 Operating tool; natural | www.wago.com/231-159 |
|  | Item no.: 210-250 Operating tool; for MCS MINI & MIDI with CAGE CLAMP® connection; red | www.wago.com/210-250 |
|  | Item no.: 231-231 Combination operating tool; red | www.wago.com/231-231 |
|  | 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 |
|  | Item no.: 231-131 Operating tool; made of insulating material; 1-way; loose; white | www.wago.com/231-131 |
|  | Item no.: 231-291 Operating tool; made of insulating material; 1-way; loose; red | www.wago.com/231-291 |
|  | Item no.: 280-432 Operating tool; made of insulating material; 2-way; white | www.wago.com/280-432 |
|  | Item no.: 280-434 Operating tool; made of insulating material; 4-way | www.wago.com/280-434 |
|  | Item no.: 280-437 Operating tool; made of insulating material; 7-way | www.wago.com/280-437 |
|  | Item no.: 280-440 Operating tool; made of insulating material; 10-way | www.wago.com/280-440 |
|  | Item no.: 280-435 Operating tool; made of insulating material; 5-way; gray | www.wago.com/280-435 |
|  | Item no.: 280-436 Operating tool; made of insulating material; 6-way | www.wago.com/280-436 |
|  | Item no.: 280-438 Operating tool; made of insulating material; 8-way | www.wago.com/280-438 |
|  | Item no.: 280-433 Operating tool; made of insulating material; 3-way | www.wago.com/280-433 |
| 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 |

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




| | |
|--|--|
| Item no.: 216-104 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-104 |
| Item no.: 216-106 Ferrule; Sleeve for 2.5 mm ² / AWG 14; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-106 |
| Item no.: 216-102 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-102 |
| Item no.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated | www.wago.com/216-103 |
| 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 |

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






| | | |
|---|---|--|
|  | 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 crimped; acc. to DIN 46228, Part 4/09.90; white | www.wago.com/216-241 |
|  | 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 |






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

| | | |
|---|---|--|
|  | Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise | www.wago.com/216-302 |
|---|---|--|

Insulations stops

| | | |
|--|--|--|
| Insulation stop | | |
|  | Item no.: 231-672 Insulation stop; 0.75 - 1 mm ² ; dark gray | www.wago.com/231-672 |
|  | Item no.: 231-670 Insulation stop; 0.08-0.2 mm ² / 0.2 mm ² "s"; white | www.wago.com/231-670 |
|  | Item no.: 231-671 Insulation stop; 0.25 - 0.5 mm ² ; light gray | www.wago.com/231-671 |

Jumpers

| | | |
|--|--|--|
| Jumper | | |
|  | Item no.: 231-905 Jumper; for conductor entry; 5-way; insulated; gray | www.wago.com/231-905 |
|  | Item no.: 231-903 Jumper; for conductor entry; 3-way; insulated; gray | www.wago.com/231-903 |
|  | Item no.: 231-907 Jumper; for conductor entry; 7-way; insulated; gray | www.wago.com/231-907 |
|  | Item no.: 231-910 Jumper; for conductor entry; 10-way; insulated; gray | www.wago.com/231-910 |
|  | Item no.: 231-902 Jumper; for conductor entry; 2-way; insulated; gray | www.wago.com/231-902 |

Downloads

Documentation

Additional Information

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

Environmental Product Compliance

Compliance Search

| | | |
|--|-----|----------|
| Environmental Product Compliance 231-620/019-000/035-000 | URL | Download |
|--|-----|----------|

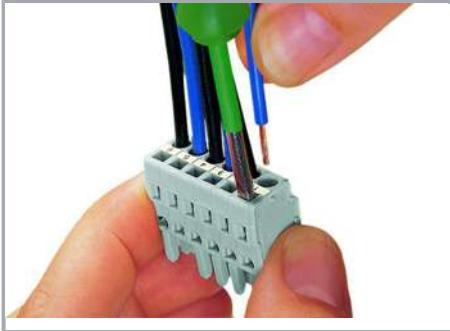
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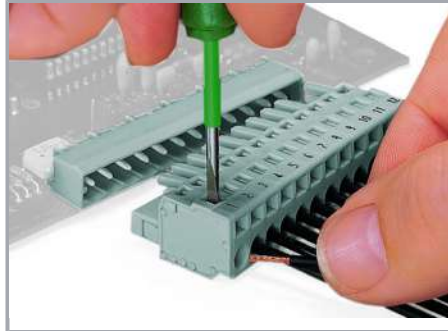
Do you have any questions about our products?
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1-conductor male connector; CAGE CLAMP®: 2.5 mm²; Pin spacing 5 mm; 20-pole;
clamping collar; Strain relief plate; 2,50 mm²; gray

Installation Notes



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

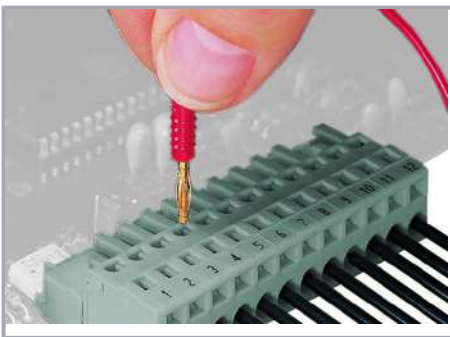
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Coding a male header – fitting coding key(s).



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!

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