

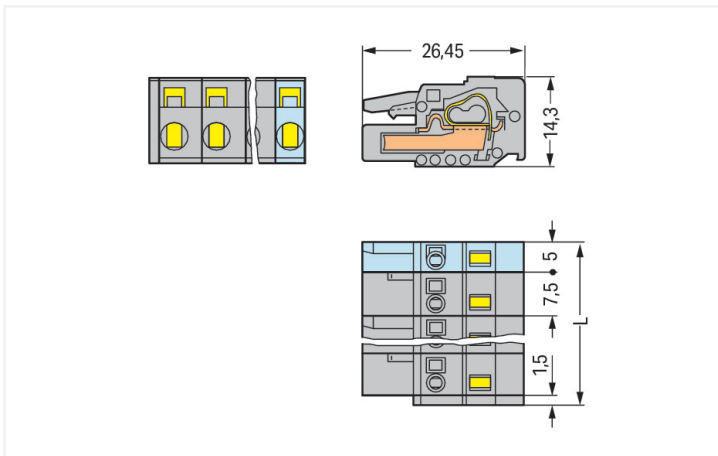
# Data Sheet | Item Number: 231-204/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 4-pole; gray

<https://www.wago.com/231-204/026-000>



Color: ■ gray



Dimensions in mm

L = (pole no. - 1) x pin spacing + 5 mm + 1.5 mm<sup>2</sup>- to 3-pole female connectors – one latch only

Female connector, 231 Series, 0° conductor exit to connection direction

This female connector (item number 231-204/026-000) is designed for fault-free electrical installations. Conductors should 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. Dimensions: (29 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 mm<sup>2</sup> to 2.5 mm<sup>2</sup>. 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 60664-1 |       |        |
|---------------------------------|----------------|-------|--------|
| Overvoltage category            | III            | III   | II     |
| Pollution degree                | 3              | 2     | 2      |
| Nominal voltage                 | 500 V          | 630 V | 1000 V |
| Rated impulse withstand voltage | 6 kV           | 6 kV  | 6 kV   |
| Rated current                   | 16 A           | 16 A  | 16 A   |

| Approvals per | UL 1059 |   |       |
|---------------|---------|---|-------|
| Use group     | B       | C | D     |
| Rated voltage | 300 V   | - | 300 V |
| Rated current | 15 A    | - | 10 A  |

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

| Approvals per | CSA   |   |       |
|---------------|-------|---|-------|
| Use group     | B     | C | D     |
| Rated voltage | 300 V | - | 300 V |
| Rated current | 15 A  | - | 10 A  |

## Connection Data

|                            |   |
|----------------------------|---|
| Clamping units             | 4 |
| Total number of potentials | 4 |
| 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 <sup>2</sup> / 28 ... 12 AWG |
| Fine-stranded conductor                           | 0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG |
| Fine-stranded conductor; with insulated ferrule   | 0.25 ... 1.5 mm <sup>2</sup>                 |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm <sup>2</sup>                 |
| Strip length                                      | 8 ... 9 mm / 0.31 ... 0.35 inches            |
| Pole number                                       | 4  |
| Conductor entry direction to mating direction     | 0°   |

## Physical data

|             |                         |
|-------------|-------------------------|
| Pin spacing | 7.5 mm / 0.295 inches   |
| Width       | 29 mm / 1.142 inches    |
| Height      | 14.3 mm / 0.563 inches  |
| Depth       | 26.45 mm / 1.041 inches |

### Mechanical data

|                          |     |
|--------------------------|-----|
| Variable coding          | Yes |
| 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)               | <a href="#">Information on material specifications can be found here</a> |
| 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                          | 0.134 MJ   |
| Weight                             | 8.2 g  |

### Environmental requirements

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

### Environmental Testing

|   |   |
|---|---|
| Test specification:<br>Railway applications –<br>Rolling stock –<br>Electronic equipment            | DIN EN 50155 (VDE 0115-200):2022-06                 |
| Test procedure:<br>Railway applications –<br>Rolling stock equipment –<br>Vibration and shock tests | DIN EN 61373 (VDE 0115-0106):2011-04                |
| Spectrum/Mounting location  | Service life test, Category 1, Class A/B            |
| Functional test with noise-like oscillations  | Test passed according to Section 8 of the standard  |
| Frequency   | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$      |
| Acceleration  | 0.101g (highest test level used for all axes)       |
| Test duration per axis  | 10 min.   |
| Test directions   | X, Y and Z axes                                     |
| Monitoring of contact faults and interruptions  | Passed  |
| Voltage drop measurement before and after each axis   | Passed  |
| Simulated service life test through increased levels of noise-like oscillations                     | Test passed according to Section 9 of the standard  |
| Frequency   | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$      |
| Acceleration  | 0.572g (highest test level used for all axes)       |
| Test duration per axis  | 5 h   |
| Test directions   | X, Y and Z axes                                     |
| Extended testing: Monitoring of contact faults and interruptions                                    | Passed  |
| Extended testing: Voltage drop measurement before and after each axis                               | Passed  |
| Shock test  | Test passed according to Section 10 of the standard |
| Shock pulse form  | Half sine   |
| Acceleration  | 5g (highest test level used for all axes)           |

### Environmental Testing

|   |                   |
|---|-------------------|
| Shock duration  | 30 ms             |
| Number of shocks (per axis)   | 3 pos. und 3 neg. |
| Test directions   | X, Y and Z axes   |
| Extended testing: Monitoring of contact faults and interruptions      | Passed            |
| Extended testing: Voltage drop measurement before and after each axis | Passed            |
| Vibration and shock stress for rolling stock equipment                | Passed            |

### Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| PU (SPU)              | 50 pcs                 |
| Packaging type        | Box                    |
| Country of origin     | DE                     |
| GTIN                  | 4044918344029          |
| Customs tariff number | 85366990990            |

### Product Classification

|             |                      |
|-------------|----------------------|
| UNSPSC      | 39121409             |
| eCl@ss 10.0 | 27-44-03-09          |
| eCl@ss 9.0  | 27-44-03-09          |
| 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<br>DEKRA Certification B.V.        | IEC 61984 | NL-113351        |
| CSA<br>DEKRA Certification B.V.       | C22.2     | 1466354          |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984  | 71-130478 REV.1  |
| UR<br>Underwriters Laboratories Inc.  | UL 1977   | E 45171          |
| UR<br>Underwriters Laboratories Inc.  | UL 1059   | E45172           |

#### Declarations of conformity and manufacturer's declarations



| Approval                      | Standard | Certificate Name |
|-------------------------------|----------|------------------|
| Railway<br>WAGO GmbH & Co. KG | -        | Railway Ready    |

Approvals for marine applications



| Approval                                | Standard  | Certificate Name  |
|---|-----------|-------------------|
| ABS<br>American Bureau of Ship-<br>ping | -         | 24-0095975-PDA    |
| BV<br>Bureau Veritas S.A.               | IEC 60998 | 11915/E0 BV       |
| DNV<br>DNV GL SE                        | -         | TAE000016Z        |
| PRS<br>Polski Rejestr Statków           | -         | TE/1095/880590/23 |

Downloads

Environmental Product Compliance

| Compliance Search                                   |
|---|
| Environmental Product Compliance<br>231-204/026-000 |

Documentation

| Additional Information |            |                   |  |
|------------------------|------------|-------------------|--|
| Technical Section      | 03.04.2019 | pdf<br>2027.26 KB |  |

CAD/CAE-Data

| CAD data                        |
|---------------------------------|
| 2D/3D Models<br>231-204/026-000 |

| CAE data                             |
|--------------------------------------|
| EPLAN Data Portal<br>231-204/026-000 |

|                                 |
|---------------------------------|
| ZUKEN Portal<br>231-204/026-000 |
|---------------------------------|

1 Compatible Products

1.1 System counterpart

1.1.1 Male connector/plug



**Item No.: 731-604**  
1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 4-pole; 2,50 mm<sup>2</sup>; gray



**Item No.: 731-604/019-000**  
1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 4-pole; clamping collar; 2,50 mm<sup>2</sup>; gray



**Item No.: 731-604/018-000**  
1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 4-pole; DIN-35 rail/panel mounting; Snap-in mounting feet; 2,50 mm<sup>2</sup>; gray



**Item No.: 731-604/114-000**  
1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 4-pole; Snap-in flange; 2,50 mm<sup>2</sup>; gray



**Item No.: 232-564/007-000**  
Double pin header; DIN-35 rail mounting; 4-pole; Pin spacing 7.5 mm; gray



**Item No.: 231-834/001-000/105-604/997-407**  
THR male header; 1.0 x 1.0 mm solder pin; angled; in tape-and-reel packaging; Pin spacing 7.5 mm; 4-pole; black



**Item No.: 231-834/001-000/105-604**  
THR male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.5 mm; 4-pole; black



**Item No.: 231-234/001-000/105-604/997-407**  
THR male header; 1.0 x 1.0 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 7.5 mm; 4-pole; black

1.1.1 Male connector/plug



**Item No.:** [231-234/001-000/105-604](#)  
THR male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 7.5 mm; 4-pole; black



**Item No.:** [231-864/001-000/105-604/997-407](#)  
THR male header; 1.2 x 1.2 mm solder pin; angled; in tape-and-reel packaging; Pin spacing 7.5 mm; 4-pole; black



**Item No.:** [231-864/001-000/105-604](#)  
THR male header; 1.2 x 1.2 mm solder pin; angled; Pin spacing 7.5 mm; 4-pole; black



**Item No.:** [231-264/001-000/105-604/997-407](#)  
THR male header; 1.2 x 1.2 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 7.5 mm; 4-pole; black



**Item No.:** [231-264/001-000/105-604](#)  
THR male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 7.5 mm; 4-pole; black



**Item No.:** [231-834/001-000](#)  
THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 7.5 mm; 4-pole; gray



**Item No.:** [231-234/001-000](#)  
THT male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 7.5 mm; 4-pole; gray



**Item No.:** [231-864/001-000](#)  
THT male header; 1.2 x 1.2 mm solder pin; angled; Pin spacing 7.5 mm; 4-pole; gray



**Item No.:** [231-264/001-000](#)  
THT male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 7.5 mm; 4-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 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow



**Item No.:** [216-302](#)  
Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise



**Item No.:** [216-201](#)  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 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 mm<sup>2</sup> / 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 mm<sup>2</sup> / 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 mm<sup>2</sup> / AWG 22; un-insulated; electro-tin plated; silver-colored



**Item No.:** [216-242](#)  
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; gray



**Item No.:** [216-262](#)  
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; gray



**Item No.:** [216-202](#)  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray



**Item No.:** [216-142](#)  
Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 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 mm<sup>2</sup> / AWG 20; un-insulated; electro-tin plated; silver-colored



**Item No.:** [216-243](#)  
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; red



**Item No.:** [216-263](#)  
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; red



**Item No.:** [216-203](#)  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red



**Item No.:** [216-103](#)  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; un-insulated; electro-tin plated



**Item No.:** [216-143](#)  
Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

1.2.2.1 Ferrule



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

**Item No.: 216-244**  
 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; black

**Item No.: 216-264**  
 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; black

**Item No.: 216-284**  
 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; black



**Item No.: 216-144**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / 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 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; silver-colored

**Item No.: 216-106**  
 Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; un-insulated; electro-tin plated; silver-colored

1.2.3 Insulation stop

1.2.3.1 Insulation stop



**Item No.: 231-673**  
 Insulation stop; 0.08-0.2 mm<sup>2</sup> / 0.2 mm<sup>2</sup> "s"; white

**Item No.: 231-674**  
 Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; light gray

**Item No.: 231-675**  
 Insulation stop; 0.75 - 1 mm<sup>2</sup>; dark gray

1.2.4 Marking

1.2.4.1 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

**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

1.2.5 Strain relief

1.2.5.1 Strain relief housing



**Item No.: 232-664**  
 Strain relief housing; for female and male connectors; 2 parts; Pin spacing 7.5 mm; 4-pole; gray

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.: 231-662**  
 Test plugs for female connectors; for 7.5 mm and 7.62 mm pin spacing; 2.50 mm<sup>2</sup>; light gray

## 1.2.7 Tool

### 1.2.7.1 Operating tool



**Item No.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



**Item No.: 210-657**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured



**Item No.: 231-291**

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

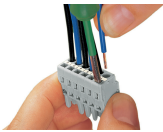


**Item No.: 231-131**

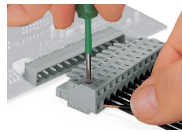
Operating tool; made of insulating material; 1-way; loose; white

## Installation Notes

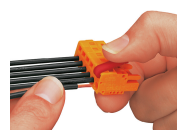
### Conductor termination



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).



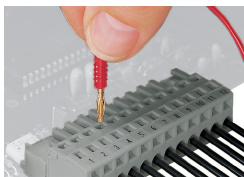
Inserting a conductor via operating tool.

## Coding



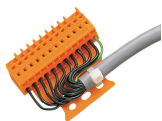
Coding a female connector by removing coding finger(s).

## 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.