

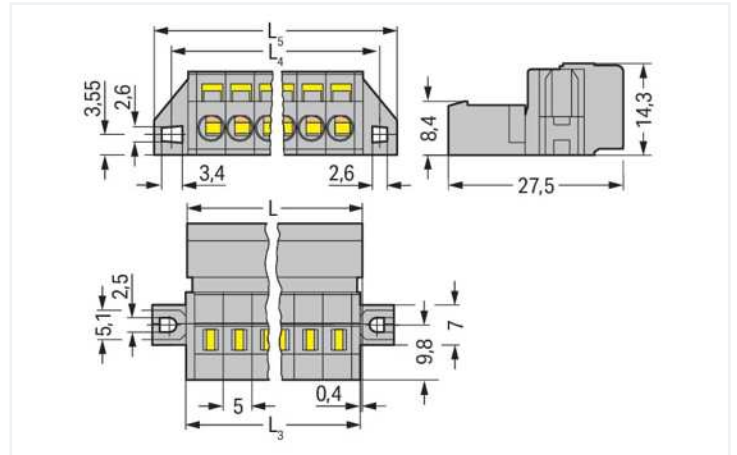
# Data Sheet | Item Number: 231-609/019-000

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole;  
clamping collar; 2,50 mm²; gray

<https://www.wago.com/231-609/019-000>



Color: ■ gray



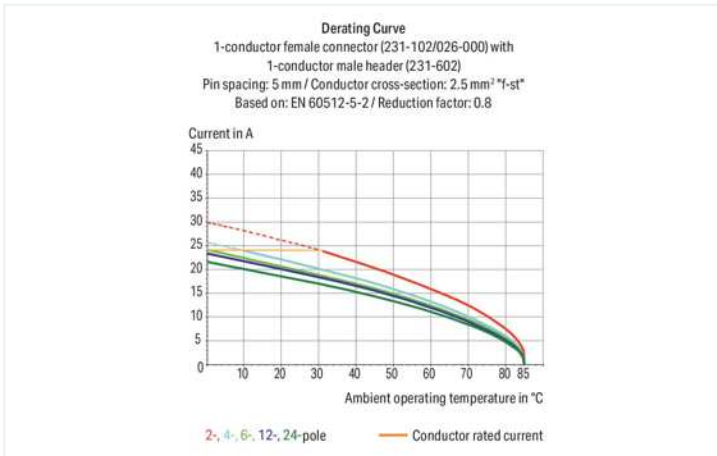
Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$

$L3 = L - 0.2 \text{ mm}$

$L4 = L3 + 5.8 \text{ mm}$

$L5 = L3 + 11.8 \text{ mm}$



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

## 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:

#### 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

### Ratings per IEC/EN

|                               |   |
|-------------------------------|---|
| Ratings per                   | IEC/EN 60664-1  |
| Nominal 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  |
| 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 |

### Ratings per UL 1059

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

|                            |   |
|----------------------------|---|
| Connection points          | 9 |
| Total number of potentials | 9 |
| 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                                       | 9  |
| Conductor entry direction to mating direction     | 0°   |

### Physical data

|             |                        |
|-------------|------------------------|
| Pin spacing | 5 mm / 0.197 inches    |
| Width       | 59.8 mm / 2.354 inches |
| Height      | 14.3 mm / 0.563 inches |
| Depth       | 27.5 mm / 1.083 inches |

### Mechanical data

|                          |  |
|--------------------------|--|
| Variable coding          | Yes  |
| Mounting type            | Mounting flange<br>Feed-through mounting<br>Panel mounting |
| Anti-rotation protection | Yes  |

### Plug-in connection

|                                    |                     |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| 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         | Polyamide (PA66)   |
| Flammability class per UL94 | V0   |
| Clamping spring material    | Chrome-nickel spring steel (CrNi)  |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> )                                   |
| Contact plating             | Tin  |
| Fire load                   | 0.416 MJ   |
| Weight                      | 14.8 g   |

### Environmental requirements

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

### Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| eCl@ss 10.0           | 27-44-03-09            |
| eCl@ss 9.0            | 27-44-03-09            |
| ETIM 8.0              | EC002638               |
| ETIM 7.0              | EC002638               |
| PU (SPU)              | 25 pcs                 |
| Packaging type        | Box                    |
| Country of origin     | DE                     |
| GTIN                  | 4044918257978          |
| Customs tariff number | 85366990990            |

### Approvals / Certificates

#### General approvals



#### General approvals

|                                |         |        |
|--------------------------------|---------|--------|
| UL                             | UL 1977 | E45171 |
| Underwriters Laboratories Inc. |         |        |

| Approval                              | Standard  | Certificate Name |
|---------------------------------------|-----------|------------------|
| CB<br>DEKRA Certification B.V.        | IEC 61984 | NL-39756/A1      |
| CSA<br>DEKRA Certification B.V.       | C22.2     | LR 18677-25      |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984  | 71-121453        |

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               | -         | 19-HG1869876-PDA |
| BV<br>Bureau Veritas S.A.                             | IEC 60998 | 11915/D0 BV      |
| DNV GL<br>Det Norske Veritas, Ger-<br>manischer Lloyd | -         | TAE000016Z       |

Downloads

Environmental Product Compliance

| Compliance Search  |
|--|
| Environmental Product<br>Compliance<br>231-609/019-000 <a href="#">↓</a> |

Documentation

| Additional Information   |
|--|
| Technical Section<br>03.04.2019<br>pdf<br>1949.09 KB <a href="#">↓</a> |

CAD/CAE-Data

| CAD data  |
|---|
| 2D/3D Models<br>231-609/019-000 <a href="#">↓</a> |

| CAE data   |
|--|
| EPLAN Data Portal<br>231-609/019-000 <a href="#">↓</a> |
| ZUKEN Portal<br>231-609/019-000 <a href="#">↓</a>      |

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



**Item No.: 231-109/026-000**  
1-conductor female connector; CAGE  
CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 9-  
pole; 2,50 mm<sup>2</sup>; gray



**Item No.: 232-239**  
THT female header; angled; Pin spacing 5  
mm; 9-pole; 0.6 x 1.0 mm solder pin; gray



**Item No.: 232-139**  
THT female header; straight; Pin spacing 5  
mm; 9-pole; 0.6 x 1.0 mm solder pin; gray

Installation Notes

### Conductor termination



Inserting a conductor via 3.5 mm screw-driver – CAGE CLAMP® actuation parallel to conductor entry.



Inserting a conductor via 3.5 mm screw-driver – 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 male header – fitting coding key (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.