

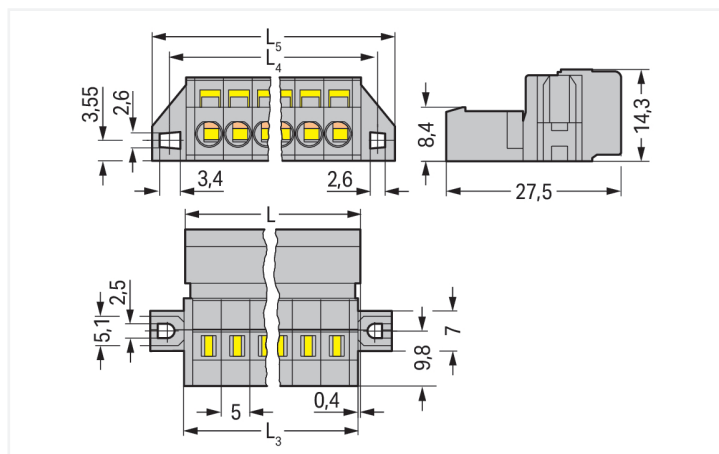
## Data Sheet | Item Number: 231-605/019-000

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

<https://www.wago.com/231-605/019-000>



Color: ■ gray



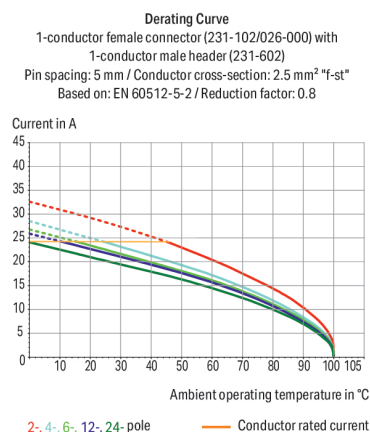
Dimensions in mm

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

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

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

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



### Stiftleiste Serie 231 mit Betätigungswerkzeug

Bei dieser Stiftleiste mit der Artikelnummer 231-605/019-000 ist eine fehlerfreie Elektroinstallation der Fokus. Mit unseren Leiterplatten-Steckverbindern erhalten Sie ein universelles Steckverbindersystem, das vielseitig eingesetzt werden kann: als Leiterplatten-Steckverbinder, als Durchführungssteckverbinder, als fliegende Steckverbindung für verschiedene Montagearten oder als Steckverbinder auf Reihenklemmen. Bei dieser Stiftleiste ist für den Leiteranschluss eine Abisolierlänge im Bereich von 8 bis 9 mm erforderlich. Bei diesem Produkt kommt die CAGE CLAMP®-Technologie zum Einsatz. Der bewährte und wartungsfreie CAGE CLAMP® Universalanschluss ermöglicht den Anschluss aller Leiterarten mit einer Käfigzugfeder. Eine Vorbehandlung der Leiter, z.B. durch das Aufcrimpen von Aderendhülsen, ist nicht erforderlich. In Breite x Höhe x Tiefe betragen die Abmessungen (39,8 x 14,3 x 27,5) mm. In Abhängigkeit von der Leiterart eignet sich die Stiftleiste für Leiterquerschnitte von 0,08 mm² bis 2,5 mm². Die Kontaktfläche ist aus Zinn. Durch ein Betätigungswerkzeug wird diese Stiftleiste/Stecker betätigt. Das MCS – "Multi Connection System" von WAGO umfasst insgesamt 7 Familien in den Rastermaßen 2,5 mm bis 10,16 mm und bietet mit dem Leiterquerschnittsbereich von 0,08 bis 25 mm² ein großes Portfolio an Einsatzmöglichkeiten.



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

| Electrical data      |  |                |       |       |
|----------------------|--|----------------|-------|-------|
| Ratings per          |  | IEC/EN 60664-1 |       |       |
| Overvoltage category |  | III            | III   | II    |
| Pollution degree     |  | 3              | 2     | 2     |
| Nominal voltage      |  | 320 V          | 320 V | 630 V |
| Rated surge voltage  |  | 4 kV           | 4 kV  | 4 kV  |
| Rated current        |  | 12 A           | 12 A  | 12 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                                    | 5                                          |  |
| Total number of potentials                        | 5                                          |  |
| 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 mm² / 28 ... 12 AWG           |  |
| Fine-stranded conductor                           | 0.08 ... 2.5 mm² / 28 ... 12 AWG           |  |
| Fine-stranded conductor; with insulated ferrule   | 0.25 ... 1.5 mm²                           |  |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm²                           |  |
| Strip length                                      | 8 ... 9 mm / 0.31 ... 0.35 inches          |  |
| Pole number                                       | 5                                          |  |
| Conductor entry direction to mating direction     | 0 °                                        |  |

| Physical data |                        |
|---------------|------------------------|
| Pin spacing   | 5 mm / 0.197 inches    |
| Width         | 39.8 mm / 1.567 inches |
| Height        | 14.3 mm / 0.563 inches |
| Depth         | 27.5 mm / 1.083 inches |



| Mechanical data          |                                         |
|--------------------------|-----------------------------------------|
| Variable coding          | Yes                                     |
| Mounting type            | Mounting flange                         |
| Mounting type            | 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 (main housing) | 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                          | 0.164 MJ                                                                 |
| Weight                             | 8.6 g                                                                    |

| Environmental requirements                                                                          |                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |  |                                                                                          |                                     |                                                                                                     |                                      |                            |                                          |                                              |                                                    |           |                                                  |              |                                               |                        |         |                 |                 |                                                |        |                                                     |        |                                                                                 |                                                    |           |                                                  |              |                                               |                        |     |                 |                 |                                                                  |        |                                                                       |        |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--|------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------|------------------------------------------|----------------------------------------------|----------------------------------------------------|-----------|--------------------------------------------------|--------------|-----------------------------------------------|------------------------|---------|-----------------|-----------------|------------------------------------------------|--------|-----------------------------------------------------|--------|---------------------------------------------------------------------------------|----------------------------------------------------|-----------|--------------------------------------------------|--------------|-----------------------------------------------|------------------------|-----|-----------------|-----------------|------------------------------------------------------------------|--------|-----------------------------------------------------------------------|--------|
| Limit temperature range                                                                             | -60 ... +100 °C                                    | <table><tr><th colspan="2">Environmental Testing</th></tr><tr><td>Test specification:<br/>Railway applications –<br/>Rolling stock –<br/>Electronic equipment</td><td>DIN EN 50155 (VDE 0115-200):2022-06</td></tr><tr><td>Test procedure:<br/>Railway applications –<br/>Rolling stock equipment –<br/>Vibration and shock tests</td><td>DIN EN 61373 (VDE 0115-0106):2011-04</td></tr><tr><td>Spectrum/Mounting location</td><td>Service life test, Category 1, Class A/B</td></tr><tr><td>Functional test with noise-like oscillations</td><td>Test passed according to Section 8 of the standard</td></tr><tr><td>Frequency</td><td>f<sub>1</sub> = 5 Hz to f<sub>2</sub> = 150 Hz</td></tr><tr><td>Acceleration</td><td>0.101g (highest test level used for all axes)</td></tr><tr><td>Test duration per axis</td><td>10 min.</td></tr><tr><td>Test directions</td><td>X, Y and Z axes</td></tr><tr><td>Monitoring of contact faults and interruptions</td><td>Passed</td></tr><tr><td>Voltage drop measurement before and after each axis</td><td>Passed</td></tr><tr><td>Simulated service life test through increased levels of noise-like oscillations</td><td>Test passed according to Section 9 of the standard</td></tr><tr><td>Frequency</td><td>f<sub>1</sub> = 5 Hz to f<sub>2</sub> = 150 Hz</td></tr><tr><td>Acceleration</td><td>0.572g (highest test level used for all axes)</td></tr><tr><td>Test duration per axis</td><td>5 h</td></tr><tr><td>Test directions</td><td>X, Y and Z axes</td></tr><tr><td>Extended testing: Monitoring of contact faults and interruptions</td><td>Passed</td></tr><tr><td>Extended testing: Voltage drop measurement before and after each axis</td><td>Passed</td></tr></table> | 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 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 |
| 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 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 <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 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                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |  |                                                                                          |                                     |                                                                                                     |                                      |                            |                                          |                                              |                                                    |           |                                                  |              |                                               |                        |         |                 |                 |                                                |        |                                                     |        |                                                                                 |                                                    |           |                                                  |              |                                               |                        |     |                 |                 |                                                                  |        |                                                                       |        |
| Processing temperature                                                                              | -35 ... +60 °C                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |  |                                                                                          |                                     |                                                                                                     |                                      |                            |                                          |                                              |                                                    |           |                                                  |              |                                               |                        |         |                 |                 |                                                |        |                                                     |        |                                                                                 |                                                    |           |                                                  |              |                                               |                        |     |                 |                 |                                                                  |        |                                                                       |        |



| Environmental Testing                                                 |                                                     |
|-----------------------------------------------------------------------|-----------------------------------------------------|
| 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)           |
| 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                  | 4044918257220          |
| Customs tariff number | 85366930000            |

| 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 8.0               | 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     | LR 18677-25                     |
| KEMA/KEUR<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                          | EN 61984  | 71-130478 REV.1                 |
| UL<br>Underwriters Laboratories Inc.                                                                                                                                                                                                                                                                                                           | UL 1977   | E45171                          |
| UL<br>Underwriters Laboratories Inc.                                                                                                                                                                                                                                                                                                           | UL 1059   | UL-US-L45172-6187117-81111991-1 |

| 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<br>DNV GL SE                        | -         | TAE000016Z       |

Downloads

Environmental Product Compliance

| Compliance Search                                      |
|--------------------------------------------------------|
| Environmental Product<br>Compliance<br>231-605/019-000 |



Documentation

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



CAD/CAE-Data

| CAD data                        |
|---------------------------------|
| 2D/3D Models<br>231-605/019-000 |



| CAE data                             |
|--------------------------------------|
| EPLAN Data Portal<br>231-605/019-000 |
| ZUKEN Portal<br>231-605/019-000      |



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



|                                                                                           |
|-------------------------------------------------------------------------------------------|
| Item No.: 231-105/026-000                                                                 |
| 1-conductor female connector; CAGE<br>CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-<br>pole; gray |



|                                                                                       |
|---------------------------------------------------------------------------------------|
| Item No.: 232-235                                                                     |
| THT female header; angled; Pin spacing 5<br>mm; 5-pole; 0.6 x 1.0 mm solder pin; gray |



|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Item No.: 232-135                                                                       |
| THT female header; straight; Pin spacing 5<br>mm; 5-pole; 0.6 x 1.0 mm solder pin; gray |



1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding



[Item No.: 231-129](#)  
Coding key; snap-on type; light gray

1.2.2 Cover

1.2.2.1 Cover



[Item No.: 231-668](#)  
Lockout caps; for covering unused clamping units; gray

1.2.3 Ferrule

1.2.3.1 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; black



[Item No.: 216-264](#)  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



[Item No.: 216-284](#)  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



[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



1.2.4 Installation

1.2.4.1 Mounting accessories



Item No.: 231-295  
Screw with nut



Item No.: 231-195  
Screw with nut; M2x12; for fixing element



Item No.: 209-147  
Self-tapping screw



Item No.: 231-194  
Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø

1.2.5 Insulation stop

1.2.5.1 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

1.2.6 Jumper

1.2.6.1 Jumper



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

1.2.7 Marking

1.2.7.1 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

1.2.8 Strain relief

1.2.8.1 Strain relief housing



**Item No.: 232-605**  
Strain relief housing; for female and male connectors; 2 parts; Pin spacing 5 mm; 5-pole; gray

1.2.9 Tool

1.2.9.1 Operating tool



**Item No.: 231-231**  
Combination operating tool; red



**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.: 209-132**  
Operating tool; for connecting comb-style jumper bar; made of insulating material; 2-way; natural



**Item No.: 210-250**  
Operating tool; for MCS MINI and MIDI with CAGE CLAMP® connection; red



**Item No.: 209-130**  
Operating tool; made of insulating material; 1-way; for 264 Series (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



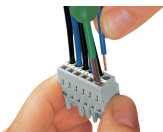
**Item No.: 280-435**  
Operating tool; made of insulating material; 5-way; gray



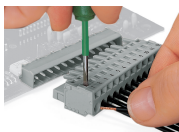
**Item No.: 231-159**  
Operating tool; natural

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.

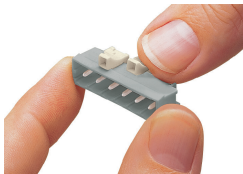


Inserting a conductor into CAGE CLAMP® unit via operating tool (231-291).



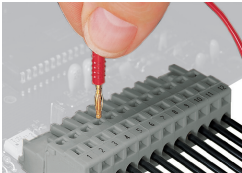
Inserting a conductor via operating tool.

Coding



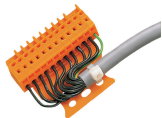
Coding a male header – fitting coding key(s).

Testing

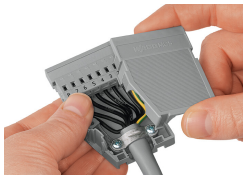


Testing – female connector with CAGE CLAMP®  
Integrated test ports for testing perpendicular to conductor entry via 2 or 2.3 mm Ø test plug

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.