

Data Sheet | Item Number: 224-104

Lighting connector; push-button on lighting side; Lighting side: for all conductor types; Inst. side: for solid conductors; 224 Series; max. 2.5 mm²; Surrounding air temperature: max 75°C; 2,50 mm²; black

<https://www.wago.com/224-104>



Color: ■ black

Notes

Safety Information

in grounded power lines

Electrical data

| Ratings per | EN 60664 | | |
|----------------------|----------|-----|-------|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | - | - | 400 V |
| Rated surge voltage | - | - | 4 kV |
| Rated current | - | - | 24 A |

Connection data

| | |
|----------------------------|---|
| Clamping units | 2 |
| Total number of potentials | 1 |

Connection 1

| | |
|---------------------------------|--------------------|
| Connection type 1 | Installation side |
| Connection technology | PUSH WIRE® |
| Number of connection points | 1 |
| Actuation type | Push-in |
| Connectable conductor materials | Copper Aluminum |

Connection 1

| | |
|--|--|
| Connectable conductor materials (note) | <p>Terminating Aluminum Conductors (Not for use in North America)</p> <p>WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste 249-130 is used for termination.</p> |
|--|--|

"Alu-Plus" Contact Paste Advantages:

- Automatically destroys the oxide film during clamping.
- Prevents fresh oxidation at the clamping point.
- Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).
- Provides long-term protection against corrosion.

Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, **aluminum conductors must first be cleaned with a blade** and then immediately be inserted into the clamping units filled with "Alu-Plus" Contact Paste.

For spring clamp connections with PUSH WIRE® connection technology, **WAGO recommends that the aluminum conductor first be cleaned** and then immediately inserted into the clamping unit filled with "Alu-Plus" contact paste.

It is also possible to apply WAGO "Alu-Plus" **additionally** on the whole surface of the aluminum conductor before termination.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors::

2.5 mm² = 16 A
4 mm² = 22 A

| | |
|------------------|---|
| Solid conductor | 1 ... 2.5 mm ² / 14 ... 12 AWG |
| Strip length | 9 ... 11 mm / 0.35 ... 0.43 inches |
| Wiring direction | Side-entry wiring |

Connection 2

| | |
|-------------------------------|---|
| Connection type 2 | Lighting side |
| Connection technology 2 | CAGE CLAMP® |
| Number of connection points 2 | 1 |
| Solid conductor 2 | 0.5 ... 2.5 mm ² / 20 ... 16 AWG |
| Fine-stranded conductor 2 | 0.5 ... 2.5 mm ² / 20 ... 16 AWG |

Physical data

| | |
|--------|------------------------|
| Width | 8 mm / 0.315 inches |
| Height | 15.5 mm / 0.61 inches |
| Depth | 20.4 mm / 0.803 inches |

Material data

| | |
|----------------------|--|
| Note (material data) | Information on material specifications can be found here |
| Color | black |
| Fire load | 0.046 MJ |
| Weight | 2.2 g |

Environmental requirements

| | |
|----------------------------------|--------|
| Ambient temperature (operation) | +75 °C |
| Continuous operating temperature | 120 °C |

Commercial data

| | |
|-----------------------|---------------|
| eCl@ss 10.0 | 27-14-11-03 |
| eCl@ss 9.0 | 27-14-11-03 |
| ETIM 8.0 | EC000446 |
| ETIM 7.0 | EC000447 |
| PU (SPU) | 100 pcs |
| Packaging type | Box |
| Country of origin | CH |
| GTIN | 4044918584050 |
| Customs tariff number | 85369010000 |

Environmental Product Compliance

| | |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|--|----------|------------------------------------|
| CSA DEKRA Certification B.V. | C22.2 | 1053495 |
| UL UL International Germany GmbH | EN 60998 | CCA-2617-A1 |
| UL UL International Germany GmbH | EN 60998 | D-05895-A1 (EN60998-1 EN60998-2-2) |
| VDE VDE Prüf- und Zertifizierungsinstitut | EN 60998 | 40022792 |

Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|--|----------|------------------|
| EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |
| UK-Declaration of Conformity WAGO GmbH & Co. KG | - | - |

Approvals for marine applications



| Approval | Standard | Certificate Name |
|--|----------|------------------|
| ABS American Bureau of Shipping | - | 18-HG1755093-PDA |
| BV Bureau Veritas S.A. | EN 60998 | 11914/D0 BV |
| DNV GL Det Norske Veritas, Germanischer Lloyd | EN 60998 | TAE000015T |
| LR Lloyds Register | EN 60998 | LR22207029TA |

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 224-104



Documentation

Bid Text

| | | | |
|---------|------------|------------------|--|
| 224-104 | 19.02.2019 | xml 3.49 KB | |
| 224-104 | 21.02.2019 | docx 15.52 KB | |

CAD/CAE-Data

CAD data

2D/3D Models 224-104



CAE data

EPLAN Data Portal 224-104



WSCAD Universe 224-104



ZUKEN Portal 224-104



1 Compatible Products

1.1 Optional Accessories

1.1.1 Tool

1.1.1.1 "Alu-Plus" contact paste

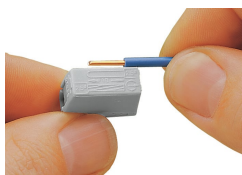
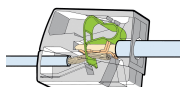


[Item No.: 249-130](#)

Syringe; Contents: 20 ml Alu-Plus contact paste

Installation Notes

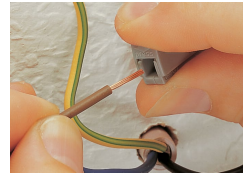
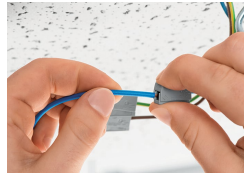
Conductor termination



Lighting Connectors (2.5 mm²), 224 Series

Strip conductor to 9 ... 11 mm (0.35 ... 0.43 inch).

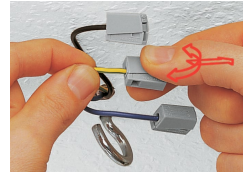
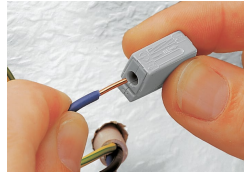
Conductor termination



To connect: Press button fully, insert stripped conductor into square entry and release.

To remove: Press button and withdraw conductor.

Conductor termination



To connect: Insert stripped solid conductor into circular entry and push until it hits the backstop.

To remove: Hold conductor to be removed and twist alternately left and right while slightly pulling the connector.

Testing



Testing via separate test ports.