

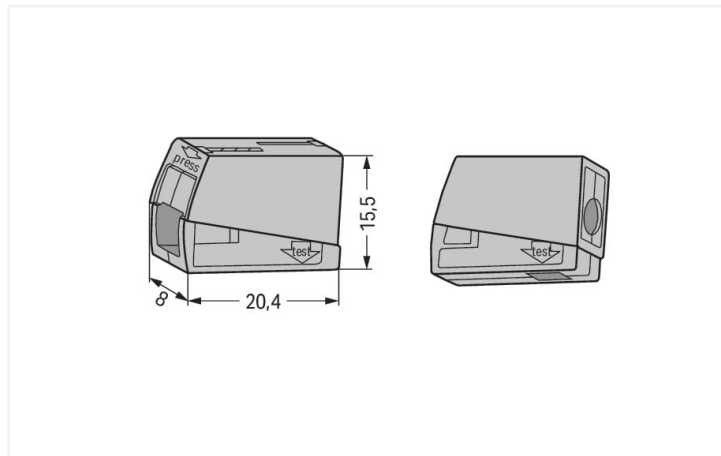
## Data Sheet | Item Number: 224-111

Lighting connector; push-button on lighting side; Alu-Plus contact paste; Lighting side: for all conductor types; Inst. side: for solid conductors; 224 Series; max. 2.5 mm<sup>2</sup>; Surrounding air temperature: max 60°C; 2,50 mm<sup>2</sup>; gray

<https://www.wago.com/224-111>



Color: ■ gray



Dimensions in mm

### 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><b>Terminating Aluminum Conductors (Not for use in North America)</b></p> <p>WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm<sup>2</sup>/12 AWG if WAGO "Alu-Plus" Contact Paste <a href="#">249-130</a> 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 mm<sup>2</sup> = 16 A  
4 mm<sup>2</sup> = 22 A

Solid conductor	1 ... 2.5 mm <sup>2</sup> / 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 <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor 2	0.5 ... 2.5 mm <sup>2</sup> / 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)	<a href="#">Information on material specifications can be found here</a>
Color	gray
Fire load	0.04 MJ
Weight	1.9 g

**Environmental requirements**

Ambient temperature (operation)	+60 °C
Continuous operating temperature	105 °C

**Commercial data**

ETIM 8.0	EC000446
ETIM 7.0	EC000447
PU (SPU)	100 pcs
Country of origin	CH
GTIN	4044918583886
Customs tariff number	85369010000

**Environmental Product Compliance**

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

**Downloads**

**Environmental Product Compliance**

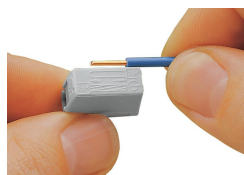
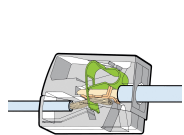
Compliance Search	
Environmental Product Compliance 224-111	<a href="#">↓</a>

**Documentation**

Bid Text			
224-101	19.02.2019	xml 3.44 KB	<a href="#">↓</a>
224-101	21.02.2019	docx 15.52 KB	<a href="#">↓</a>

**Installation Notes**

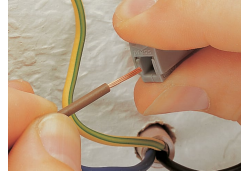
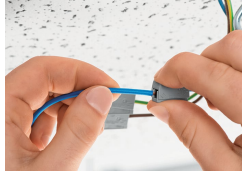
**Conductor termination**



Lighting Connectors (2.5 mm²), 224 Series

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

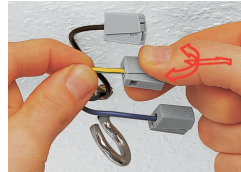
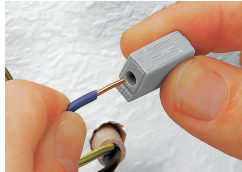
### Conductor termination



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

To remove: Press button and withdraw conductor.

### Conductor termination



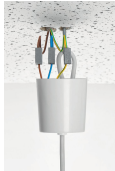
To connect: Insert stripped solid conductor into circular entry and push until it hits the backstop.

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

### Testing



Testing via separate test ports.



Connecting solid conductors with fine-stranded conductors via lighting connectors (224-101).