

## Gegevensblad | Artikelnummer: 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 mm<sup>2</sup>; Surrounding air temperature: max 75°C; 2,50 mm<sup>2</sup>; black

[www.wago.com/224-104](http://www.wago.com/224-104)



### Artikelbeschrijving

#### Note:

##### Terminating Aluminum Conductors

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 is used for termination.

"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.

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

Wijzigingen voorbehouden. Let ook op de verdere productdocumentatie!

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4 mm<sup>2</sup> = 22 A**Safety information 1:**

in grounded power lines

**Gegevens****Electrical data****Ratings per IEC/EN 60664-1**

Ratings per	EN 60664
Nominal voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV
Rated current	24 A
Legend (ratings)	(II / 2) ≙ Overvoltage category II / Pollution degree 2

**Connection data**

Connection type (1)	Installation side
Connection technology	PUSH WIRE®
Number of connection points (connection type)	1
Actuation type	Push-in
Connectable conductor materials	Copper Aluminum
Solid conductor	1 ... 2.5 mm <sup>2</sup> / 14 ... 12 AWG
Strip length	9 ... 11 mm / 0.35 ... 0.43 inch
Connection type 2	Lighting side
Connection technology 2	CAGE CLAMP®
Number of connection points	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
Total number of connection points	2
Total number of potentials	1
Wiring type	Side-entry wiring

**Geometrical Data**

Width	8 mm / 0.315 inch
Height	15.5 mm / 0.61 inch
Depth	20.4 mm / 0.803 inch

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## Material Data

Color	black
Fire load	0,051 MJ
Weight	2,2 g

## Environmental Requirements



Surrounding air temperature (operation)	60 ... 60 °C
Continuous operating temperature	120 ... 120 °C

## Commercial data



Packaging type	BOX
Country of origin	CH
GTIN	4044918584050
Customs tariff number	85369010000

## Vergunningen / certificaten

### Country specific Approvals

Logo	Vergunning	Norm	Certificaatsnaam
	CSA DEKRA Certification B.V.	C22.2	1053495
	VDE VDE Prüf- und Zertifizierungsinstitut	EN 60998	40022792

### Ship Approvals

Logo	Vergunning	Norm	Certificaatsnaam
	ABS American Bureau of Shipping	-	18-HG1755093-PDA
	BV Bureau Veritas S.A.	EN 60998	11914/CO BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	EN 60998	TAE000015T

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LR  
Lloyds Register

EN 60998

04/20013 (E8)



### UL-Approvals

Logo	Vergunning	Norm	Certificaatsnaam
	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)

### Relevante producten

#### General accessories

	Artikelnummer: 249-130 Syringe; Contents: 20 ml Alu-Plus contact paste	<a href="http://www.wago.com/249-130">www.wago.com/249-130</a>
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### Downloads

#### Documentation

##### Bid Text

224-104 GAEB X81 - Datei	19-feb-2019	xml 3,6 kB	Download
224-104 GAEB docx - Datei	21-feb-2019	docx 15,9 kB	Download

##### Additional Information

Technical explanations	3-apr-2019	pdf 2,1 MB	Download
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## CAD/CAE-Data

### CAD data

2D/3D Models 224-104	URL	Download
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### CAE data

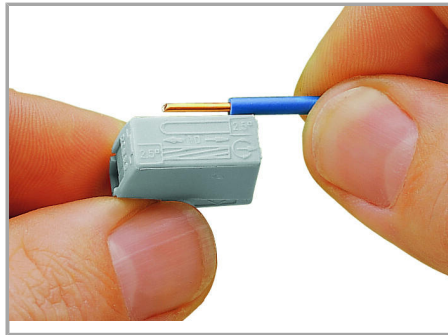
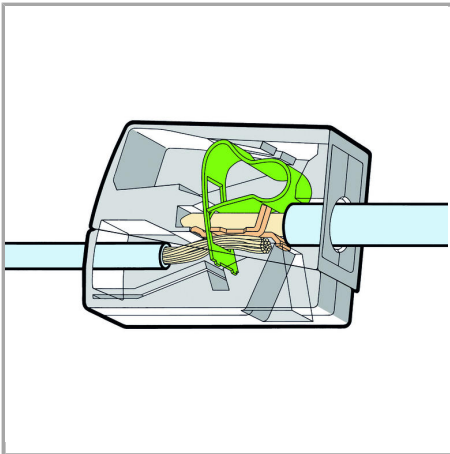
EPLAN Data Portal 224-104	URL	Download
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WSCAD Universe 224-104	URL	Download
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ZUKEN Portal 224-104	URL	Download
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## Gebruiksaanwijzingen

### Conductor termination



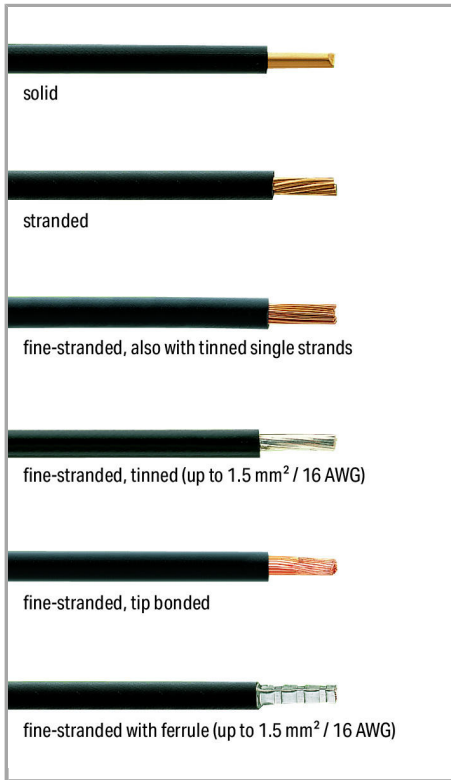
Strip conductor to 9 ... 11 mm (0.35 ... 0.43 inch).

Lighting Connectors, 2.5 mm<sup>2</sup> (12 AWG), 224 Series

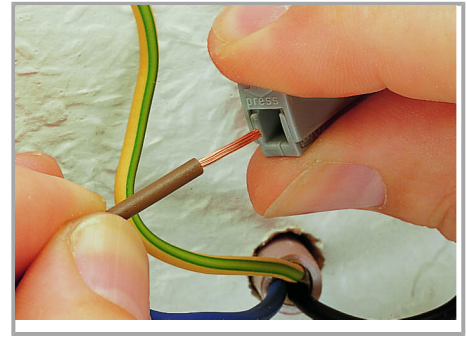
Wijzigingen voorbehouden. Let ook op de verdere productdocumentatie!

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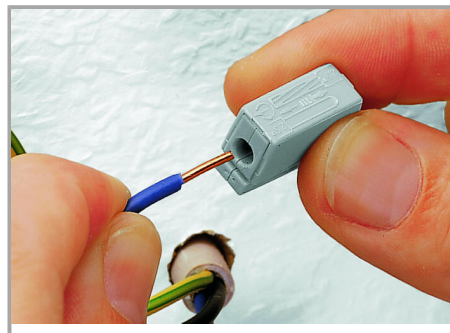
Hebt u vragen over onze producten?  
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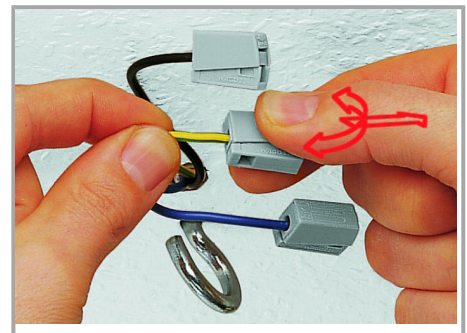
To connect: Press button fully, insert stripped conductor into square entry and release.



To remove: Press button and withdraw conductor.



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

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Testing via separate test ports.

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