

**Data sheet | Item number: 250-109**

PCB terminal block; push-button; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 9-pole; Push-in CAGE CLAMP®; 1,50 mm<sup>2</sup>; gray



[www.wago.com/250-109](http://www.wago.com/250-109)



Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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### Item description

- Compact terminal strips with push-buttons
- Push-in terminations of solid and ferruled conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring
- Custom color combinations
- Terminal strips also available with spacers upon request

Subject to changes. Please also observe the further product documentation!



## Data Notes

Variants:	Other pole numbers Other colors Mixed-color PCB connector strips Terminal strips with spacers Direct marking Other versions (or variants) can be requested from WAGO Sales or configured at <a href="https://configurator.wago.com/">https://configurator.wago.com/</a> .
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## Electrical data

### Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	160 V
Rated impulse voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated impulse voltage (III/2)	2.5 kV
Nominal voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV
Rated current	8 A
Legend (ratings)	(III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2

### Ratings per UL

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	5 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	5 A

### Ratings per CSA

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	10 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

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## Connection data

Connection points	9
Total number of potentials	9
Number of connection types	1
Number of levels	1

## Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Push-button
Solid conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>
Strip length	8.5 ... 9.5 mm / 0.33 ... 0.37 inches
Conductor connection direction to PCB	45 °
Pole number	9

## Physical data

Pin spacing	3.5 mm / 0.138 inches
Width	33 mm / 1.299 inches
Height	16.7 mm / 0.657 inches
Height from the surface	13.1 mm / 0.516 inches
Depth	12 mm / 0.472 inches
Solder pin length	3.4 mm
Solder pin dimensions	0.4 x 0.75 mm
Drilled hole diameter with tolerance	1.1 <sup>(+0.1)</sup> mm

## Plug-in connection

Plugging without loss of pin spacing	No
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## PCB contact

PCB contact	THT
Solder pin arrangement	over the entire terminal strip (in-line)
Number of solder pins per potential	1

Subject to changes. Please also observe the further product documentation!



## Material Data

Note (material data)

Information on material specifications can be found here

Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Copper alloy
Contact plating	Tin
Fire load	0.096 MJ
Weight	4.3 g

## Environmental requirements

Limit temperature range	-60 ... +105 °C
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## Commercial data

Product Group	4 (Printed Circuit Connectors)
eCl@ss 10.0	27-44-04-01
eCl@ss 9.0	27-44-04-01
ETIM 8.0	EC002643
ETIM 7.0	EC002643
PU (SPU)	140 (35) pcs
Packaging type	box
Country of origin	CH
GTIN	4044918647670
Customs tariff number	85369010000

## Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	NTR NL 7833/2

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<b>CCA</b> DEKRA Certification B.V.	EN 60998	NTR NL- 7705/1
<b>CSA</b> DEKRA Certification B.V.	C22.2	1132097
<b>KEMA/KEUR</b> DEKRA Certification B.V.	EN 60947	2160584.18
<b>KEMA/KEUR</b> DEKRA Certification B.V.	EN 60998	71-124629
<b>UL</b> UL International Germany GmbH	UL 1059	E45172

## Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	<b>EU-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-
	<b>UK-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-

## Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	19- HG1869876- PDA
	<b>BV</b> Bureau Veritas S.A.	IEC 60998	11915/DO BV
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAE000016Z

## Optional accessories

## Ferrule

Ferrule	
<b>Item no.: 216-101</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-101">www.wago.com/216-101</a>
<b>Item no.: 216-102</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-102">www.wago.com/216-102</a>
<b>Item no.: 216-103</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-103">www.wago.com/216-103</a>
<b>Item no.: 216-123</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-123">www.wago.com/216-123</a>

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<b>Item no.: 216-122</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-122">www.wago.com/216-122</a>
<b>Item no.: 216-142</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	<a href="http://www.wago.com/216-142">www.wago.com/216-142</a>
<b>Item no.: 216-132</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-132">www.wago.com/216-132</a>
<b>Item no.: 216-121</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-121">www.wago.com/216-121</a>
<b>Item no.: 216-143</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	<a href="http://www.wago.com/216-143">www.wago.com/216-143</a>
<b>Item no.: 216-131</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-131">www.wago.com/216-131</a>
<b>Item no.: 216-141</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	<a href="http://www.wago.com/216-141">www.wago.com/216-141</a>
<b>Item no.: 216-152</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-152">www.wago.com/216-152</a>
<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-203">www.wago.com/216-203</a>
<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-202">www.wago.com/216-202</a>
<b>Item no.: 216-151</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-151">www.wago.com/216-151</a>
<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>
<b>Item no.: 216-241</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
<b>Item no.: 216-242</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
<b>Item no.: 216-243</b>	

Subject to changes. Please also observe the further product documentation!



Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; [www.wago.com/216-243](http://www.wago.com/216-243)  
acc. to DIN 46228, Part 4/09.90; red

**Item no.: 216-263**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; [www.wago.com/216-263](http://www.wago.com/216-263)  
acc. to DIN 46228, Part 4/09.90; red

**Item no.: 216-262**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray [www.wago.com/216-262](http://www.wago.com/216-262)

**Item no.: 216-301**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow [www.wago.com/216-301](http://www.wago.com/216-301)

**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow [www.wago.com/216-321](http://www.wago.com/216-321)

**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise [www.wago.com/216-322](http://www.wago.com/216-322)

**Item no.: 216-302**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise [www.wago.com/216-302](http://www.wago.com/216-302)

**Testing and measuring**

## Testing accessories

**Item no.: 735-500**

WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm<sup>2</sup> [www.wago.com/735-500](http://www.wago.com/735-500)

**Marking accessories**

## Marking strip

**Item no.: 210-332/350-202**

Marking strips; as a DIN A4 sheet; MARKED; 1-16 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white [www.wago.com/210-332/350-202](http://www.wago.com/210-332/350-202)

**Item no.: 210-332/350-206**

Marking strips; as a DIN A4 sheet; MARKED; 33-48 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white [www.wago.com/210-332/350-206](http://www.wago.com/210-332/350-206)

**Item no.: 210-332/350-204**

Marking strips; as a DIN A4 sheet; MARKED; 17-32 (240x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white [www.wago.com/210-332/350-204](http://www.wago.com/210-332/350-204)

**Tool**

## Operating tool

**Item no.: 210-657**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured [www.wago.com/210-657](http://www.wago.com/210-657)

**Item no.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured [www.wago.com/210-720](http://www.wago.com/210-720)

Subject to changes. Please also observe the further product documentation!

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Hansastr. 27

32423 Minden

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## Downloads

### Documentation

#### Additional Information

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## CAD/CAE-Data

### CAD data

2D/3D Models 250-109	URL	Download
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### CAE data

EPLAN Data Portal 250-109	URL	Download
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ZUKEN Portal 250-109	URL	Download
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### PCB Design

Symbol and Footprint 250-109	URL	Download
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CAx data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

### Supported formats:

- Accel EDA 14 & 15
- Altium 6 to current version
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer

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- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

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## Environmental Product Compliance

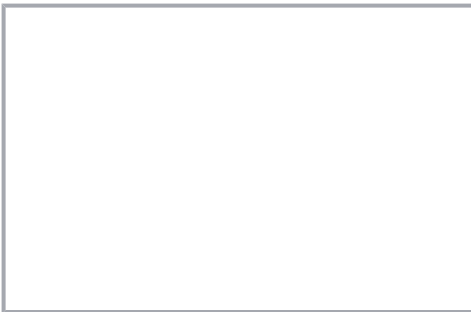
### Compliance Search

Environmental Product Compliance 250-109	URL	Download
PCB terminal block; push-button; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 9-pole; Push-in CAGE CLAMP®; 1,50 mm <sup>2</sup> ; gray		

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## Installation Notes

### Conductor termination



Inserting solid conductors via push-in termination.

Inserting fine-stranded conductors via push-buttons, 250 Series – 3.5 mm pin spacing.

### Conductor termination

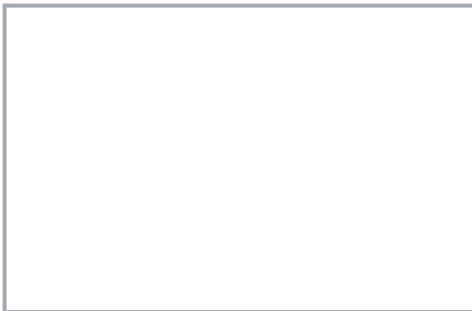
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Subject to changes. Please also observe the further product documentation!



Space-saving wiring, 250 Series – 5 mm pin spacing.

### Testing

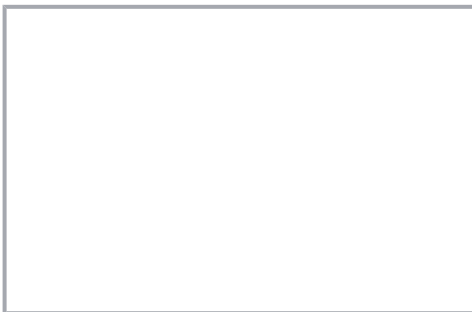


Testing with 11 mm Ø test pin, on the conductor, 250 Series – 2.5 ... 3.5 mm pin spacing.

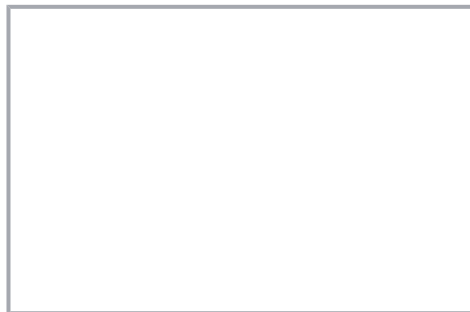


Testing with 2 mm Ø test plug, touch contact, 250 Series – 5 mm pin spacing.

### Marking



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.

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