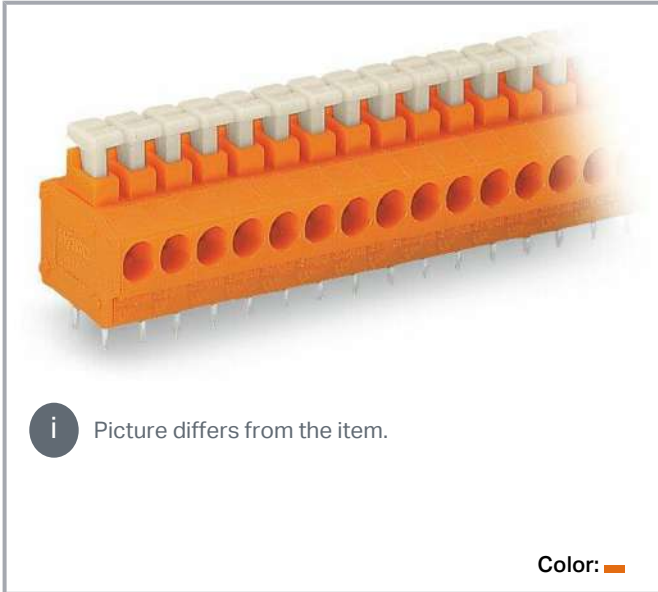


Data sheet | Item number: 235-109

PCB terminal block; push-button; 1.5 mm²; Pin spacing 3.81 mm; 9-pole;
Push-in CAGE CLAMP®; 1,50 mm²; orange



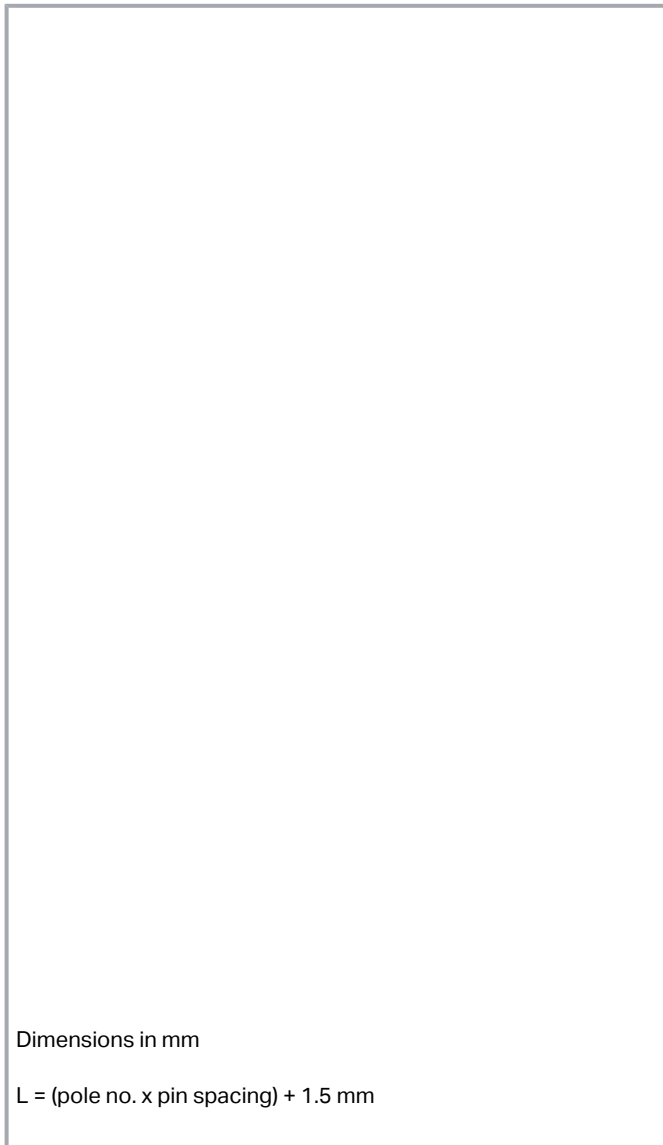
www.wago.com/235-109



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

WAGO Corporation
Germantown, WI 53022
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222
Email: info.us@wago.com | Web: www.wago.us

Do you have any questions about our products?
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Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 1.5 \text{ mm}$

Item description

- PCB terminal strips with push-buttons
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons

Data

Notes

Variants:

Other pole numbers

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

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Other colors
 Mixed-color PCB connector strips
 Direct marking
 Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>

Electrical data

IEC Approvals

Ratings per	IEC/EN 60664-1
Rated voltage (III / 3)	200 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Nominal voltage (II/2)	500 V
Rated surge voltage (II/2)	4 kV
Rated current	17.5 A
Legend (ratings)	(III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2

UL Approvals

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	10 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	10 A

CSA Approvals

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

Connection data

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

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

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Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Push-button
Solid conductor	0.5 ... 1.5 mm ² / 20 ... 16 AWG
Fine-stranded conductor	0.75 ... 1.5 mm ² / 20 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm ²
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Conductor connection direction to PCB	0°
Number of poles	9

Physical data

Pin spacing	3.81 mm / 0.15 inch
Width	35.79 mm / 1.409 inch
Height	19.1 mm / 0.752 inch
Height from the surface	15.5 mm / 0.61 inch
Depth	12.5 mm / 0.492 inch
Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.8 mm
Drilled hole diameter with tolerance	1 ^(+0.1) mm

PCB contact

PCB Contact	THT
Solder pin arrangement	over the entire terminal strip (in-line)
Number of solder pins per potential	2

Material data

Color	orange
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E _{Cu})
Contact plating	tin-plated
Fire load	0.094 MJ

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

Weight	5.3 g
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Environmental requirements







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

Product Group	4 (Printed Circuit)
PU (SPU)	120 (30) Stück
Packaging type	box
Country of origin	CH
GTIN	4044918828826
Customs tariff number	8536904000



Approvals / Certificates

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	NTR NL-7144
	CCA DEKRA Certification B.V.	EN 60998	NTR NL-6919
	CCA DEKRA Certification B.V.	EN 60947	2149549.02
	CCA DEKRA Certification B.V.	EN 60947-7-4	NTR NL-7774
	CSA DEKRA Certification B.V.	C22.2	1673956
	VDE VDE Prüf- und Zertifizierungsinstitut	EN 60947	40029328

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

Ship Approvals

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

Optional accessories

Marking accessories

Marking strip		
Item no.: 210-332/381-202 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		www.wago.com/210-332/381-202
Item no.: 210-332/381-206 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		www.wago.com/210-332/381-206
Item no.: 210-332/381-205 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		www.wago.com/210-332/381-205
Item no.: 210-332/381-204 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		www.wago.com/210-332/381-204

Ferrules

Ferrule		
Item no.: 216-101 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored		www.wago.com/216-101
Item no.: 216-102 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated; silver-colored		www.wago.com/216-102
Item no.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated		www.wago.com/216-103
Item no.: 216-123		www.wago.com/216-123

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










Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored



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

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



	Item no.: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-243
	Item no.: 216-263 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-263
	Item no.: 216-262 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-262
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-301
	Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-321
	Item no.: 216-322 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; green	www.wago.com/216-322
	Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise	www.wago.com/216-302

Tools

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
	Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	www.wago.com/210-720

Downloads

Documentation

Additional Information

Technical explanations	2019 Apr 3	pdf 2.0 MB	Download
		pdf 125.0 kB	Download

CAD files

CAD data

2D/3D Models 235-109	URL	Download
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PCB Design

Symbol and Footprint 235-109	URL	Download
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Subject to changes. Please also observe the further product documentation!



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
- 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

CAE data

ZUKEN Portal 235-109	URL	Download
EPLAN Data Portal 235-109	URL	Download

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 235-109	URL	Download
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Subject to changes. Please also observe the further product documentation!

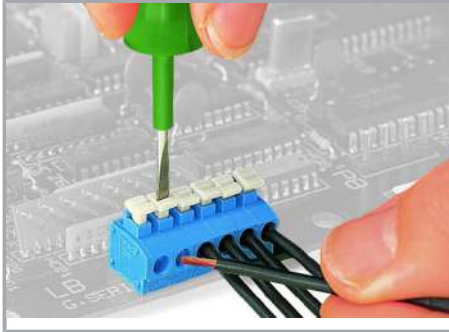
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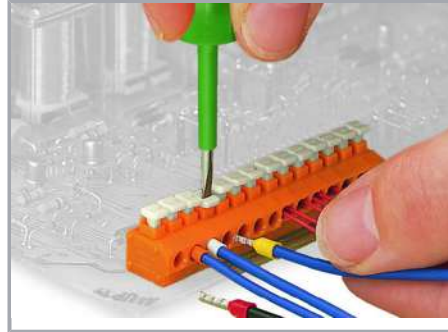
PCB terminal block; push-button; 1.5 mm²; Pin spacing 3.81 mm; 9-pole; Push-in
CAGE CLAMP®; 1,50 mm²; orange

Installation Notes

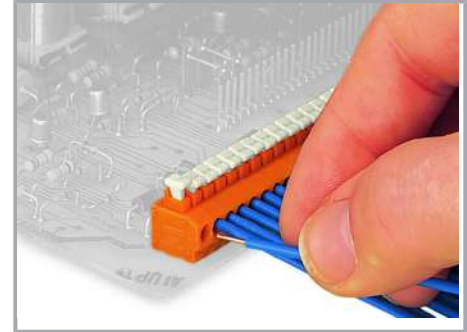
Conductor termination



Inserting/removing fine-stranded conductors via push-button.

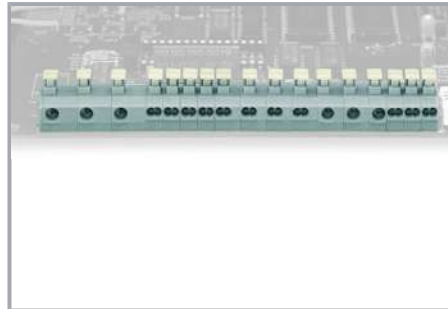
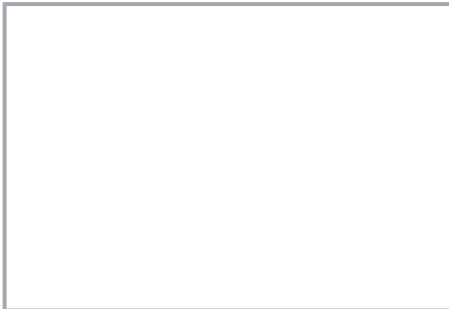


Insert/remove fine-stranded conductors with ferrules via push-button.



Insert solid conductors via push-in termination.

Installation



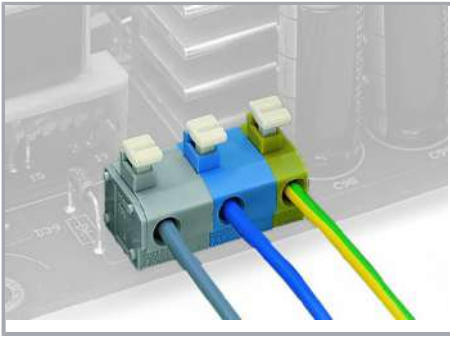
Combining 1- and 2-conductor terminal blocks with different pin spacing.

Testing

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

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Application example: field-wiring terminal strip

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