

**Data sheet | Item number: 235-778**

Stackable PCB terminal block; push-button; 1.5 mm<sup>2</sup>; Pin spacing 3.81 mm;  
1-pole; Push-in CAGE CLAMP®; 1,50 mm<sup>2</sup>; black



[www.wago.com/235-778](http://www.wago.com/235-778)



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

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We are always happy to take your call at +49 (571) 887-44222.



## Item description

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

## Data

### Notes

Variants:

Other colors

Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

## Electrical data

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

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## Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	200 V
Rated impulse voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated impulse 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

## Ratings per UL

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

## Ratings per CSA

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

## Connection data

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

## Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Push-button
Solid conductor	0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor	0.75 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1 mm <sup>2</sup>

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



Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1 mm <sup>2</sup>
Note (conductor cross-section)	Fine-stranded conductor 0.75 ... 1.5 mm <sup>2</sup> / 18 ... 16 AWG (I max. 4 A)
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Conductor connection direction to PCB	0°
Pole number	1

### Physical data

Pin spacing	3.81 mm / 0.15 inches
Width	5.3 mm / 0.209 inches
Height	19.1 mm / 0.752 inches
Height from the surface	15.5 mm / 0.61 inches
Depth	12.5 mm / 0.492 inches
Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.8 mm
Drilled hole diameter with tolerance	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	within the terminal block (in-line)
Number of solder pins per potential	2

### Material Data

Note (material data)	Information on material specifications can be found here
Color	black
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 <sub>Cu</sub> )
Contact plating	Tin
Fire load	0.01 MJ

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



Weight	0.6 g
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## 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)	800 (100) pcs
Packaging type	box
Country of origin	CN
GTIN	4044918833028
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
	<b>CCA</b> DEKRA Certification B.V.	EN 60947	NTR NL-7144
	<b>CCA</b> DEKRA Certification B.V.	EN 60998	NTR NL-6919
	<b>CCA</b> DEKRA Certification B.V.	EN 60947-7-4	NTR NL-7774
	<b>KEMA/KEUR</b> DEKRA Certification B.V.	EN 60947	2160584.38

### 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>	-	-

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WAGO GmbH &amp; Co. KG

## Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1869876- PDA

## Required accessories

## End plate

End plate		
Item no.: 235-850 End plate; snap-fit type; 1 mm thick; white		<a href="http://www.wago.com/235-850">www.wago.com/235-850</a>
Item no.: 235-800 End plate; snap-fit type; 1 mm thick; red		<a href="http://www.wago.com/235-800">www.wago.com/235-800</a>
Item no.: 235-100 End plate; snap-fit type; 1 mm thick; gray		<a href="http://www.wago.com/235-100">www.wago.com/235-100</a>
Item no.: 235-500 End plate; snap-fit type; 1 mm thick; black		<a href="http://www.wago.com/235-500">www.wago.com/235-500</a>
Item no.: 235-600 End plate; snap-fit type; 1 mm thick; orange		<a href="http://www.wago.com/235-600">www.wago.com/235-600</a>
Item no.: 235-700 End plate; snap-fit type; 1 mm thick; light green		<a href="http://www.wago.com/235-700">www.wago.com/235-700</a>
Item no.: 235-550 End plate; snap-fit type; 1 mm thick; yellow		<a href="http://www.wago.com/235-550">www.wago.com/235-550</a>
Item no.: 235-200 End plate; snap-fit type; 1 mm thick; dark gray		<a href="http://www.wago.com/235-200">www.wago.com/235-200</a>
Item no.: 235-400 End plate; snap-fit type; 1 mm thick; blue		<a href="http://www.wago.com/235-400">www.wago.com/235-400</a>

## Optional accessories

## Ferrule

Ferrule		
Item no.: 216-101 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>
Item no.: 216-102		<a href="http://www.wago.com/216-102">www.wago.com/216-102</a>

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Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored

**Item no.: 216-103**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated

[www.wago.com/216-103](http://www.wago.com/216-103)

**Item no.: 216-123**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored

[www.wago.com/216-123](http://www.wago.com/216-123)

**Item no.: 216-122**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored

[www.wago.com/216-122](http://www.wago.com/216-122)

**Item no.: 216-142**

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

[www.wago.com/216-142](http://www.wago.com/216-142)

**Item no.: 216-132**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

[www.wago.com/216-132](http://www.wago.com/216-132)

**Item no.: 216-121**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored

[www.wago.com/216-121](http://www.wago.com/216-121)

**Item no.: 216-143**

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

[www.wago.com/216-143](http://www.wago.com/216-143)

**Item no.: 216-131**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored

[www.wago.com/216-131](http://www.wago.com/216-131)

**Item no.: 216-141**

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

[www.wago.com/216-141](http://www.wago.com/216-141)

**Item no.: 216-152**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

[www.wago.com/216-152](http://www.wago.com/216-152)

**Item no.: 216-203**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

[www.wago.com/216-203](http://www.wago.com/216-203)

**Item no.: 216-202**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

[www.wago.com/216-202](http://www.wago.com/216-202)

**Item no.: 216-151**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

[www.wago.com/216-151](http://www.wago.com/216-151)

**Item no.: 216-201**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

[www.wago.com/216-201](http://www.wago.com/216-201)

**Item no.: 216-223**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red

[www.wago.com/216-223](http://www.wago.com/216-223)

**Item no.: 216-241**

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

[www.wago.com/216-241](http://www.wago.com/216-241)

**Item no.: 216-242**

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/216-242](http://www.wago.com/216-242)

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

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<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> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
<b>Item no.: 216-263</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-263">www.wago.com/216-263</a>
<b>Item no.: 216-262</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/216-262">www.wago.com/216-262</a>
<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-301">www.wago.com/216-301</a>
<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-321">www.wago.com/216-321</a>
<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>
<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>
<b>Mounting</b>	
Intermediate plate	
<b>Item no.: 235-316</b> Spacer; for doubling the pin spacing; orange	<a href="http://www.wago.com/235-316">www.wago.com/235-316</a>
<b>Tool</b>	
Operating tool	
<b>Item no.: 210-657</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	<a href="http://www.wago.com/210-657">www.wago.com/210-657</a>
<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>
<b>Marking accessories</b>	
Marking strip	
<b>Item no.: 210-332/381-202</b> 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	<a href="http://www.wago.com/210-332/381-202">www.wago.com/210-332/381-202</a>
<b>Item no.: 210-332/381-206</b> 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	<a href="http://www.wago.com/210-332/381-206">www.wago.com/210-332/381-206</a>

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





**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](http://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](http://www.wago.com/210-332/381-204)

## Downloads

### Documentation

#### Additional Information

2019 年4月3日

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## CAD/CAE-Data

### CAD data

2D/3D Models 235-778

[URL](#)

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### CAE data

EPLAN Data Portal 235-778

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### PCB Design

Symbol and Footprint 235-778

[URL](#)

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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

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- 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

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## Environmental Product Compliance

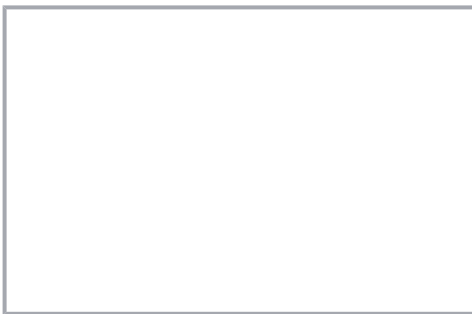
### Compliance Search

Environmental Product Compliance 235-778	URL	Download
Stackable PCB terminal block; push-button; 1.5 mm <sup>2</sup> ; Pin spacing 3.81 mm; 1-pole; Push-in CAGE CLAMP®; 1,50 mm <sup>2</sup> ; black		

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## Installation Notes

### Conductor termination



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



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

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

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Insert solid conductors via push-in termination.

### Installation



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

### Testing



Application example: field-wiring terminal strip

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