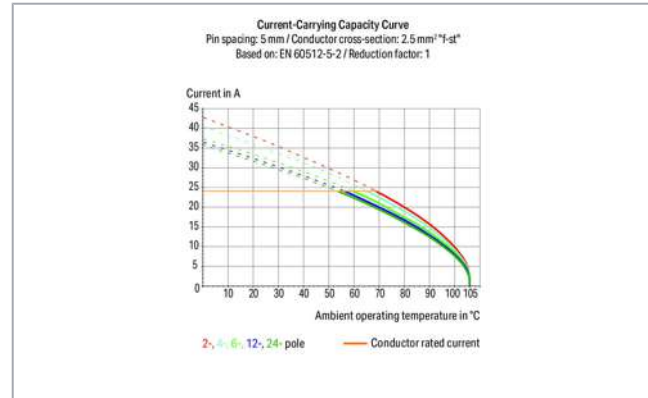
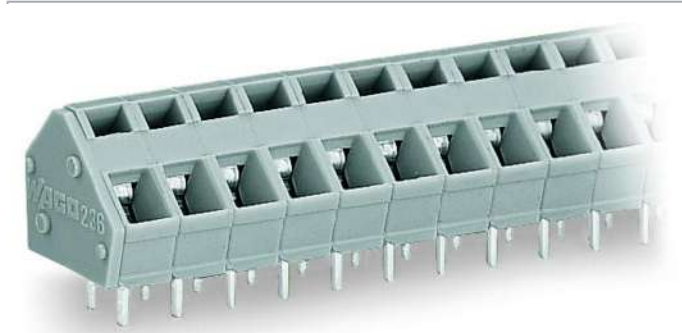


## Data sheet | Item number: 236-448

PCB terminal block; 2.5 mm<sup>2</sup>; Pin spacing 5/5.08 mm; 48-pole; CAGE CLAMP®; commoning option; 2,50 mm<sup>2</sup>; gray



[www.wago.com/236-448](http://www.wago.com/236-448)

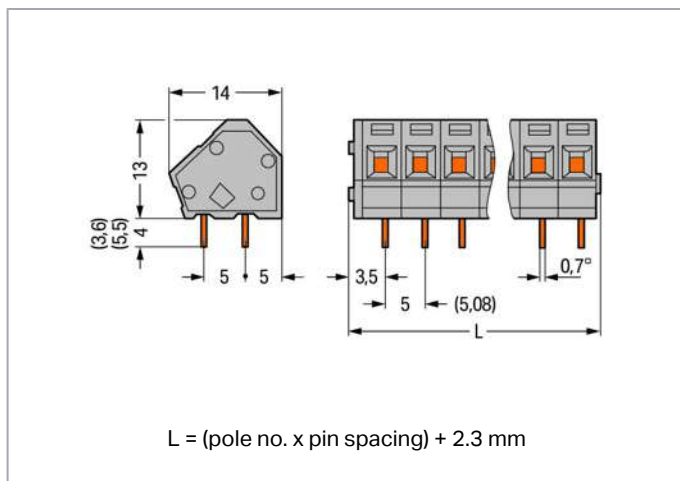


**i** Picture differs from the item.

RoHS  Compliant

[BOMcheck.net](https://www.bomcheck.net)

Color:



### Item description

- PCB terminal strips with CAGE CLAMP® connection, screwdriver actuation parallel or perpendicular to conductor entry
- Versions with Ex approval
- Mixed-color PCB terminal strips from factory

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

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Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

Do you have any questions about our products?  
We are always happy to take your call at {0}.



- Operating tools for factory wiring
- 45° conductor entry angle permits a wide range of applications and wiring options
- Set to metric or inch pin spacing by compressing PCB terminal strips or pulling them apart

## Data

### Electrical data

#### Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60664-1
Rated voltage (III / 3)	250 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)	630 V
Rated surge voltage (II/2)	4 kV
Rated current	24 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

#### Ratings per UL 1059

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	15 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)	15 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

### Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG

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



Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch
Conductor connection direction to PCB	45°
Pole No.	48
Total number of connection points	48
Total number of potentials	48
Number of connection types	1
Number of levels	1
Note (conductor cross-section)	12 AWG: THHN, THWN

### Physical data

Pin spacing	5/5.08 mm / 0.197/0.2 inch
Width	242.3 mm / 9.539 inch
Height	17 mm / 0.669 inch
Height from the surface	13 mm / 0.512 inch
Depth	14 mm / 0.551 inch
Solder pin length	4 mm
Solder pin dimensions	0.7 x 0.7 mm
Drilled hole diameter with tolerance	1.1 (+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	gray
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-plated
Fire load	0.58 MJ

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

Weight	42.2g
--------	-------

## Environmental Requirements





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

## Commercial data


Product Group	4 (Printed Circuit)
Packaging type	BOX
Country of origin	CH
GTIN	4044918771993
Customs tariff number	8536901000

## Approvals / Certificates

### Country specific Approvals


Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	NTR NL-7109
	CCA DEKRA Certification B.V.	EN 60998	NTR NL-7195
	CCA DEKRA Certification B.V.	EN 60947	2168090.01
	CSA DEKRA Certification B.V.	C22.2 No. 158	1673957

### Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	BV Bureau Veritas S.A.	IEC 60998	11915/D0 BV

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



## UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	20180629- E45172

## Counterpart

## Compatible products












## 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.: 216-104</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; silver-colored	<a href="http://www.wago.com/216-104">www.wago.com/216-104</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.: 216-122</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.: 216-123</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>
	<b>Item no.: 216-124</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated	<a href="http://www.wago.com/216-124">www.wago.com/216-124</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.: 216-132</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.: 216-141</b>	

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

	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.: 216-142</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.: 216-143</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.: 216-144</b>	
	Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	<a href="http://www.wago.com/216-144">www.wago.com/216-144</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.: 216-152</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.: 216-201</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.: 216-202</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.: 216-203</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.: 216-204</b>	
	Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-204">www.wago.com/216-204</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.: 216-222</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.: 216-223</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.: 216-224</b>	
	Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-224">www.wago.com/216-224</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.: 216-243</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.: 216-244</b>	

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

	Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-244">www.wago.com/216-244</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.: 216-263</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.: 216-264</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-264">www.wago.com/216-264</a>
	<b>Item no.: 216-284</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-284">www.wago.com/216-284</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.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<a href="http://www.wago.com/216-302">www.wago.com/216-302</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; green	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>
<b>check</b>		
	<b>Item no.: 231-127</b> Testing plug module with contact stud; for 236 Series; Pin spacing 5 mm / 0.197 in; 2,50 mm <sup>2</sup> ; gray	<a href="http://www.wago.com/231-127">www.wago.com/231-127</a>
	<b>Item no.: 231-128</b> Testing plug module with contact stud; Pin spacing 5.08 mm / 0.2 in; 2,50 mm <sup>2</sup> ; orange	<a href="http://www.wago.com/231-128">www.wago.com/231-128</a>
<b>Marking accessories</b>		
	<b>Item no.: 210-332/500-202</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/210-332/500-202">www.wago.com/210-332/500-202</a>
	<b>Item no.: 210-332/500-204</b> 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	<a href="http://www.wago.com/210-332/500-204">www.wago.com/210-332/500-204</a>
	<b>Item no.: 210-332/500-205</b> 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	<a href="http://www.wago.com/210-332/500-205">www.wago.com/210-332/500-205</a>
	<b>Item no.: 210-332/500-206</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/210-332/500-206">www.wago.com/210-332/500-206</a>
	<b>Item no.: 210-332/508-202</b>	

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




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/210-332/508-202](http://www.wago.com/210-332/508-202)


**Item no.: 210-332/508-204**  
 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/210-332/508-204](http://www.wago.com/210-332/508-204)


**Item no.: 210-332/508-205**  
 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/210-332/508-205](http://www.wago.com/210-332/508-205)

**Item no.: 210-332/508-206**  
 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/210-332/508-206](http://www.wago.com/210-332/508-206)

**tools**

 **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.: 210-658**  
 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured [www.wago.com/210-658](http://www.wago.com/210-658)

 **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)

 **Item no.: 236-332**  
 Operating tool; natural [www.wago.com/236-332](http://www.wago.com/236-332)

 **Item no.: 236-335**  
 Operating tool; gray [www.wago.com/236-335](http://www.wago.com/236-335)

**Downloads**

**Documentation**

**Additional Information**

Technical explanations	Apr 3, 2019	pdf 3.6 MB	Download
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**CAD files**

**CAD data**

2D/3D Models 236-448	URL	Download
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**CAE data**

EPLAN Data Portal 236-448	URL	Download
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**7I IKFN Portal 236-448**

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## PCB Design

Symbol and Footprint 236-448

[URL](#) [Download](#)

CAD 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

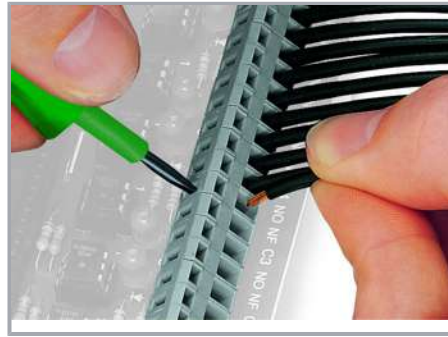
## Installation Notes

### Conductor termination

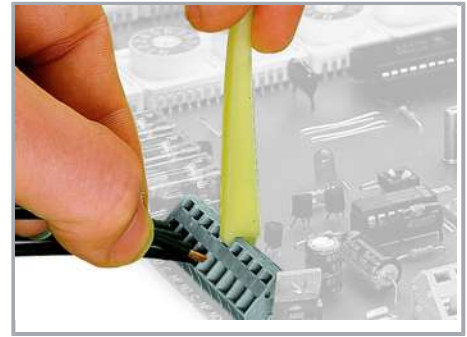
Subject to changes. Please also observe the further product documentation!



Inserting a conductor via 3.5 mm screwdriver.



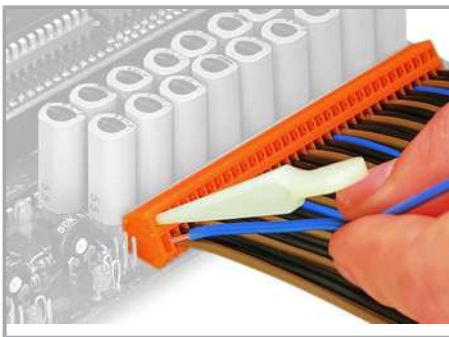
Inserting a conductor via 3.5 mm screwdriver.



Inserting a conductor via operating tool.

Screwdriver actuation parallel to conductor entry.

Screwdriver actuation perpendicular to conductor entry.



Compared to standard screwdrivers, these operating tools are far more convenient for wiring PCB terminal strips at factory.

## Installation

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

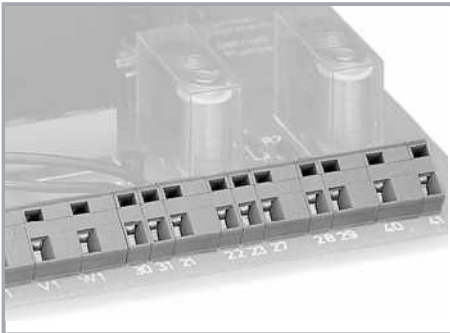
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Do you have any questions about our products?  
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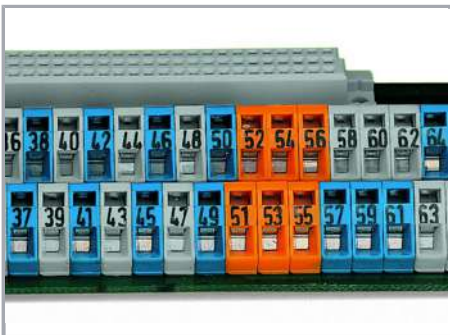
PCB Terminal Strips placed behind each other save space – staggering them by half the pin spacing simplifies subsequent wiring of the first row.

### Installation

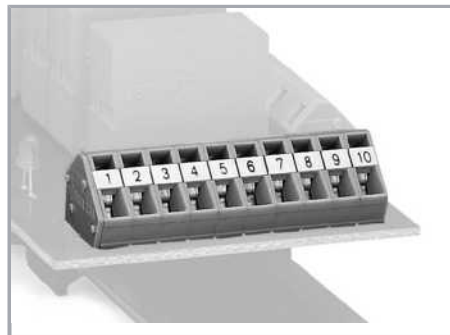


Combining PCB terminal blocks with different pin spacing.

### Marking



Labeling via factory direct marking.



Labeling with self-adhesive marking strips.

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