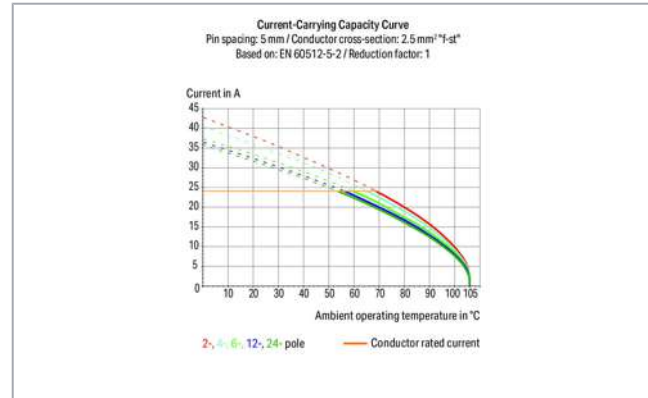
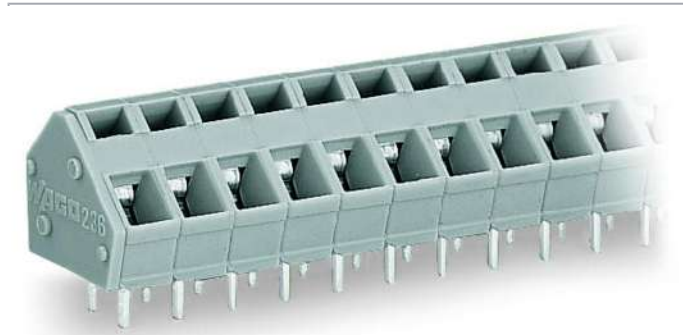


## Data sheet | Item number: 236-448/332-009/999-950

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



[www.wago.com/236-448\\_332-009\\_999-950](http://www.wago.com/236-448_332-009_999-950)

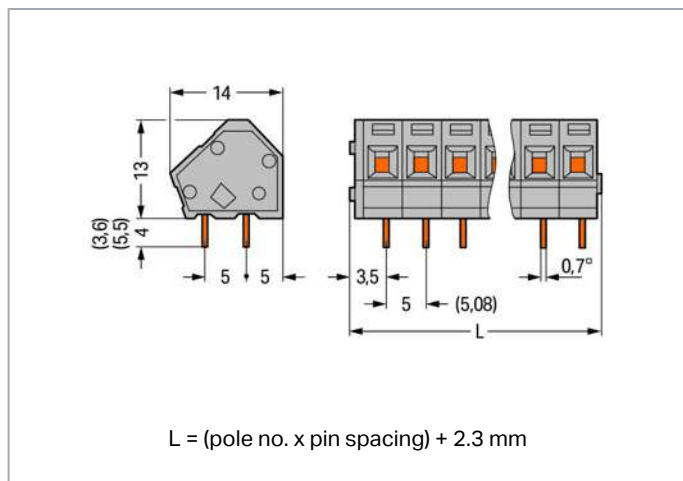


**i** Picture differs from the item.

RoHS  Compliant

BOMcheck.net

Color:



### Item description

- PCB terminal strips with CAGE CLAMP® connection, screwdriver actuation parallel or perpendicular to conductor entry
- Operating tools for factory wiring
- 45° conductor entry angle permits a wide range of applications and wiring options

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](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

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- Set to metric or inch pin spacing by compressing PCB terminal strips or pulling them apart

## Data

### Electrical data

### Ex information

Ratings per	ATEX: PTB 06 ATEX 1061 U / IECEx: PTB 06.0042 U
Rated voltage EN (Ex e II)	176 V
Rated current (Ex e II)	16 A

### Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
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	18.5 mm / 0.728 inch
Height from the surface	13 mm / 0.512 inch
Depth	14 mm / 0.551 inch
Solder pin length	5.5 mm
Solder pin dimensions	0.7 x 0.7 mm
Drilled hole diameter with tolerance	1.1 (+0.1) mm

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

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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	2

## Material Data

Color	light 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
Weight	1.1 g

## Environmental Requirements



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

## Commercial data

Packaging type	BOX
GTIN	4017332630719

## Approvals / Certificates

### Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	AEx UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt	UL 60079	E185892 sec.3
	ATEX Physikalisch Technische Bundesanstalt (PTB)	EN 60079	PTB 06 Atex 1061 U (II 2 G Ex eII bzw. I M2 Ex eI)
	IECEX Physikalisch Technische Bundesanstalt	IEC 60079	IECEX PTB 06.0042U

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## Counterpart

## Compatible products

### Marking accessories

<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> 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/210-332/508-202">www.wago.com/210-332/508-202</a>
<b>Item no.: 210-332/508-204</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/210-332/508-204">www.wago.com/210-332/508-204</a>
<b>Item no.: 210-332/508-205</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/210-332/508-205">www.wago.com/210-332/508-205</a>
<b>Item no.: 210-332/508-206</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/210-332/508-206">www.wago.com/210-332/508-206</a>


















### 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)

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









	<b>Item no.: 210-658</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured	<a href="http://www.wago.com/210-658">www.wago.com/210-658</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>Item no.: 236-332</b> Operating tool; natural	<a href="http://www.wago.com/236-332">www.wago.com/236-332</a>
	<b>Item no.: 236-335</b> Operating tool; gray	<a href="http://www.wago.com/236-335">www.wago.com/236-335</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>ferrule</b>		
	<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> 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>

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

	<p><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</p>	<a href="http://www.wago.com/216-142">www.wago.com/216-142</a>
	<p><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</p>	<a href="http://www.wago.com/216-143">www.wago.com/216-143</a>
	<p><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</p>	<a href="http://www.wago.com/216-144">www.wago.com/216-144</a>
	<p><b>Item no.: 216-151</b>                  Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated</p>	<a href="http://www.wago.com/216-151">www.wago.com/216-151</a>
	<p><b>Item no.: 216-152</b>                  Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated</p>	<a href="http://www.wago.com/216-152">www.wago.com/216-152</a>
	<p><b>Item no.: 216-201</b>                  Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white</p>	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
	<p><b>Item no.: 216-202</b>                  Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray</p>	<a href="http://www.wago.com/216-202">www.wago.com/216-202</a>
	<p><b>Item no.: 216-203</b>                  Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red</p>	<a href="http://www.wago.com/216-203">www.wago.com/216-203</a>
	<p><b>Item no.: 216-204</b>                  Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black</p>	<a href="http://www.wago.com/216-204">www.wago.com/216-204</a>
	<p><b>Item no.: 216-221</b>                  Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white</p>	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
	<p><b>Item no.: 216-222</b>                  Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray</p>	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
	<p><b>Item no.: 216-223</b>                  Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; red</p>	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>
	<p><b>Item no.: 216-224</b>                  Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black</p>	<a href="http://www.wago.com/216-224">www.wago.com/216-224</a>
	<p><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</p>	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<p><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</p>	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<p><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</p>	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<p><b>Item no.: 216-244</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</p>	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>

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	<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>

## 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 236-448/332-009/999-950	URL	Download
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#### CAE data

EPLAN Data Portal 236-448/332-009/999-950	URL	Download
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### PCB Design

Symbol and Footprint 236-448/332-009/999-950	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.

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#### 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

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#### Installation Notes

##### Conductor termination

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

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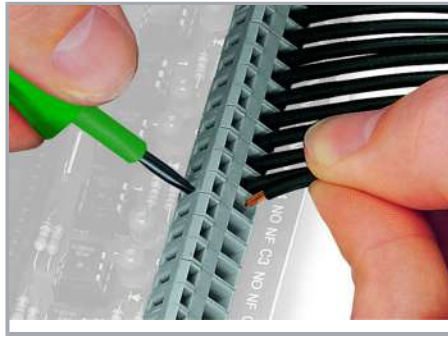
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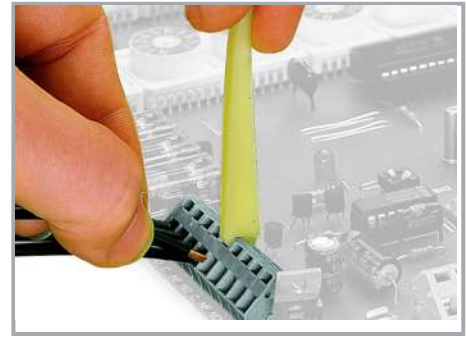




Inserting a conductor via 3.5 mm screwdriver.



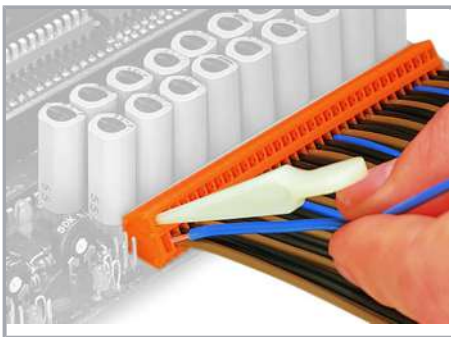
Inserting a conductor via 3.5 mm screwdriver.



Inserting a conductor via operating tool.

Screwdriver actuation parallel to conductor entry.

Screwdriver actuation perpendicular to conductor entry.



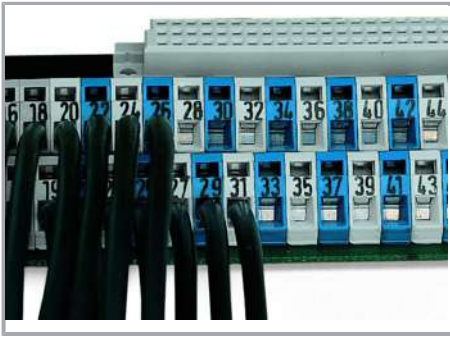
Compared to standard screwdrivers, these operating tools are far more convenient for wiring PCB terminal strips at factory.

## Installation

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

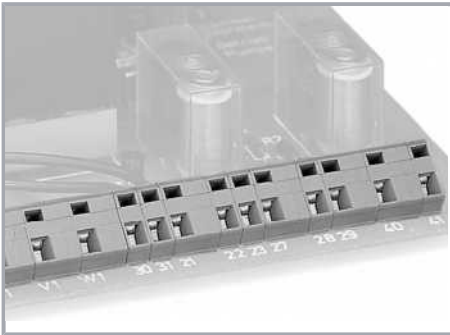
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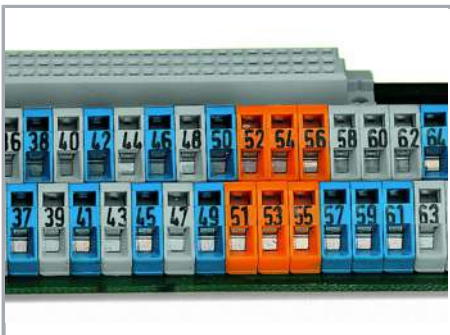
PCB Terminal Strips placed behind each other save space – staggering them by half the pin spacing simplifies subsequent wiring of the first row.

### Installation

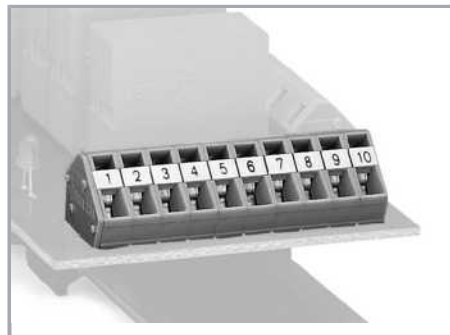


Combining PCB terminal blocks with different pin spacing.

### Marking



Labeling via factory direct marking.



Labeling with self-adhesive marking strips.

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