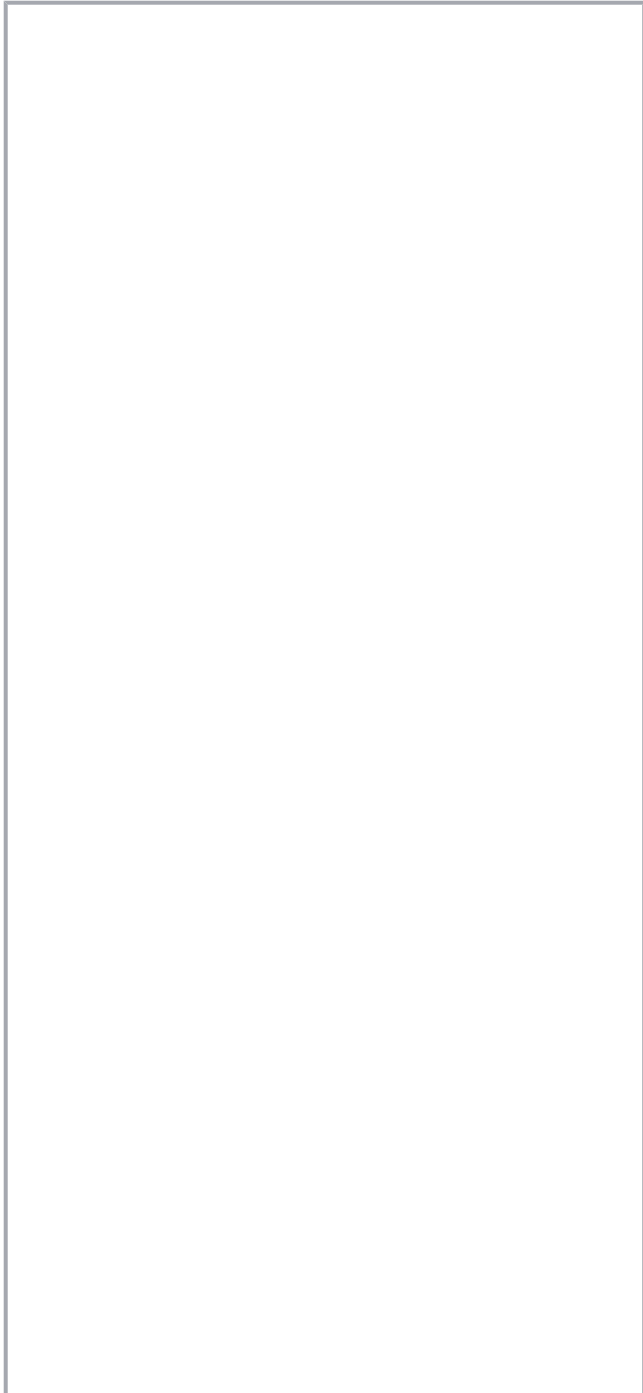
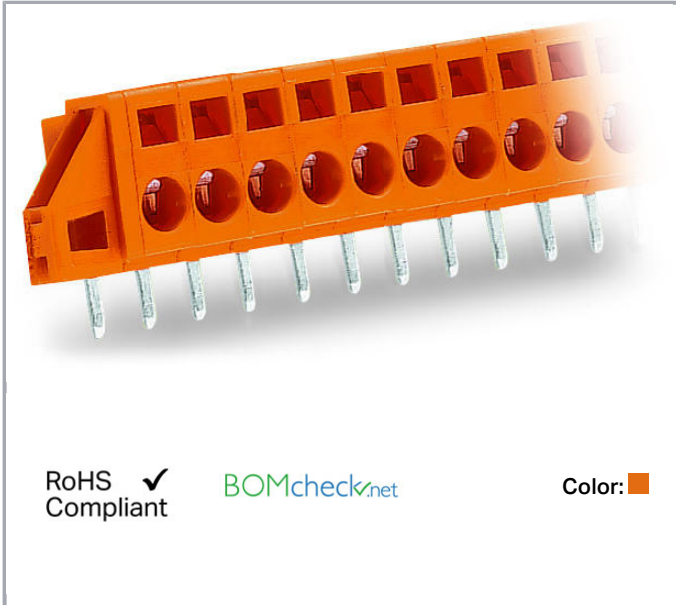


**Data sheet | Item number: 231-639/023-000**

PCB terminal block; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 9-pole; CAGE CLAMP®; clamping collar; 2,50 mm<sup>2</sup>; orange

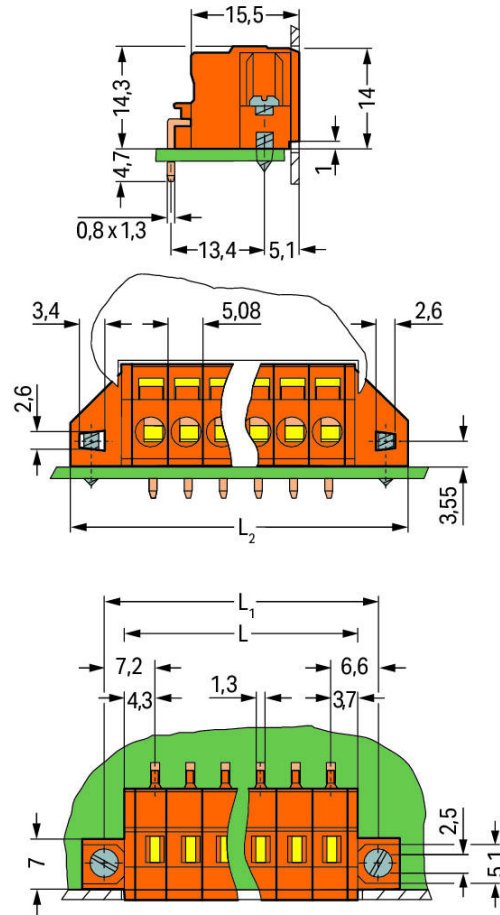
[www.wago.com/231-639/023-000](http://www.wago.com/231-639/023-000)



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$$L = (\text{pole no.} \times \text{pin spacing}) + 3 \text{ mm}$$

$$L_1 = L + 5.8 \text{ mm}$$

$$L_2 = L_1 + 6.4 \text{ mm}$$

for mounting plate thickness up to 1.5 mm

## Item description

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

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- Feedthrough PCB terminal strips with screwdriver-actuated CAGE CLAMP®
- With flanges for PCB or front-panel mounting – either flush with enclosure or protruding

## Data

### Electrical data

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

Ratings per	IEC/EN 60664-1
Rated voltage (III / 3)	320 V
Rated impulse voltage (III / 3)	4 kV
Rated voltage (III / 2)	320 V
Rated impulse voltage (III / 2)	4 kV
Rated voltage (II / 2)	630 V
Rated impulse voltage (II / 2)	4 kV
Rated current	16 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

#### 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 C)	150 V
Rated current UL (Use Group C)	15 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	10 A
Approvals per	UL 1059

#### Approvals per CSA

Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	15 A
Rated voltage CSA (Use Group C)	150 V
Rated current CSA (Use Group C)	15 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

### Connection data

Connection technology	CAGE CLAMP®
-----------------------	-------------

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



Actuation type	Operating tool
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor with ferrule with plastic collar	0.25 ... 1.5 mm <sup>2</sup>
Fine-stranded conductor with ferrule without plastic collar	0.25 ... 2.5 mm <sup>2</sup>
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor entry angle to the PCB	0°
No. of poles	9
Total number of connection points	9
Total number of potentials	9
Number of connection types	1
Number of levels	1

### Geometrical Data

Pin spacing	5.08 mm / 0.2 inch
Width	60.92 mm / 2.398 inch
Height	19 mm / 0.748 inch
Height from the surface	14.3 mm / 0.563 inch
Depth	19.1 mm / 0.752 inch
Solder pin length	4.7 mm
Solder pin dimensions	0.8 x 1.3 mm
Drilled hole diameter (tolerance)	1.8 (+0.1) mm

### Mechanical data

Gehäuseblechstärke	1.5 ... 1.5 mm / 0.059 ... 0.059 inch
Mounting type	Mounting flange
Type of mounting	Feed-through mounting Panel mounting

### PCB contact

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

### Material Data

Color	orange
-------	--------

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

Material group	I
Insulating material	Polyamide 66 (PA 66)
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	0.205 MJ
Weight	13 g

### Environmental Requirements


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

### Commercial data


Product Group	3 (Multi Conn. System)
Packaging type	BOX
Country of origin	DE
GTIN	4044918283229
Customs Tariff No.	85366990990

### Approvals / Certificates

#### Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CSA DEKRA Certification B.V.	C22.2	1466354

#### UL-Approvals

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

### Counterpart

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## Compatible products

### tools


**Item no.: 210-657**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short

[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

[www.wago.com/210-720](http://www.wago.com/210-720)

### Marking accessories

**Item no.: 210-332/508-202**

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/210-332/508-202](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)
**Item no.: 210-833**

Marking strips; on reel; 6 mm wide; plain; Self-adhesive; white

[www.wago.com/210-833](http://www.wago.com/210-833)

**Item no.: 210-834**

Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

[www.wago.com/210-834](http://www.wago.com/210-834)

### ferrule

**Item no.: 216-101**

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

[www.wago.com/216-101](http://www.wago.com/216-101)

**Item no.: 216-102**

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

[www.wago.com/216-102](http://www.wago.com/216-102)
**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.: 216-104**

 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; uninsulated; electro-tin plated

[www.wago.com/216-104](http://www.wago.com/216-104)
**Item no.: 216-106**

 Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; uninsulated; electro-tin plated

[www.wago.com/216-106](http://www.wago.com/216-106)

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

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	<b>Item no.: 216-121</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated	<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	<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	<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	<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>
	<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	<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>

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

**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.: 216-224**Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; black[www.wago.com/216-224](http://www.wago.com/216-224)**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)**Item no.: 216-243**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[www.wago.com/216-243](http://www.wago.com/216-243)**Item no.: 216-244**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[www.wago.com/216-244](http://www.wago.com/216-244)**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.: 216-263**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[www.wago.com/216-263](http://www.wago.com/216-263)**Item no.: 216-264**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[www.wago.com/216-264](http://www.wago.com/216-264)**Item no.: 216-284**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[www.wago.com/216-284](http://www.wago.com/216-284)**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.: 216-302**Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; green[www.wago.com/216-302](http://www.wago.com/216-302)**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; green[www.wago.com/216-322](http://www.wago.com/216-322)**assembling****Item no.: 209-147**

Self-tapping screw

[www.wago.com/209-147](http://www.wago.com/209-147)

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

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**Item no.: 231-194**  
Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø

[www.wago.com/231-194](http://www.wago.com/231-194)



**Item no.: 231-195**  
Screw with nut; M2x12; for fixing element

[www.wago.com/231-195](http://www.wago.com/231-195)

## Downloads

### Documentation

#### Additional Information

Technical explanations	Apr 3, 2019	pdf 3.6 MB	Download
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## CAD/CAE-Data

### CAE data

EPLAN Data Portal 231-639/023-000	URL	Download
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### PCB Design

Symbol and Footprint 231-639/023-000	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
- STL

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

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

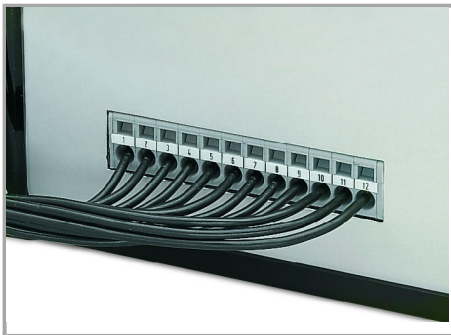
PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

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## Installation Notes



Feedthrough PCB terminal strips – front-entry conductor termination



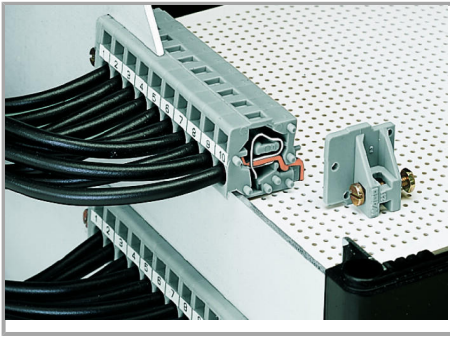
Feedthrough PCB terminal strips can be used as front-panel feedthrough for external conductor termination.

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

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With flanges for PCB or front-panel mounting – either flush with enclosure or protruding

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