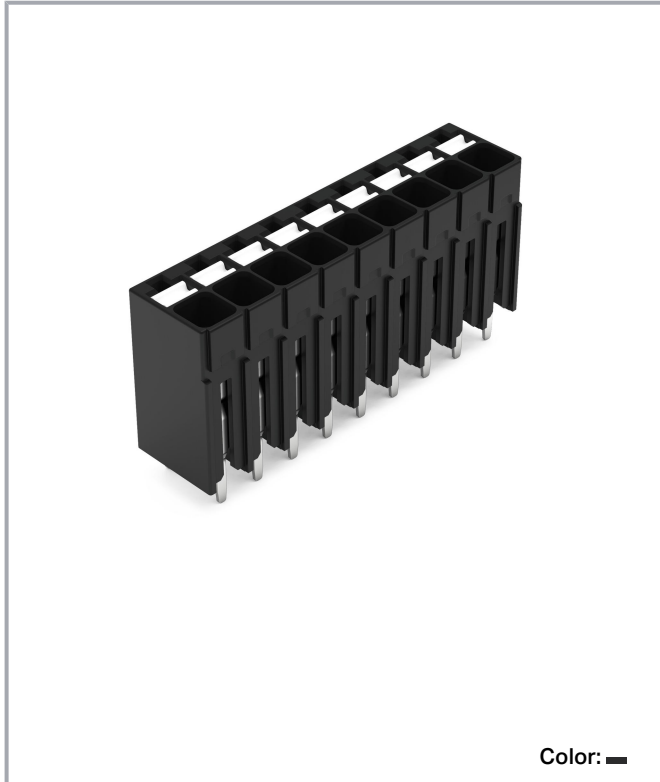


**Data sheet | Item number: 2086-1109**

THR PCB terminal block; push-button; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 9-pole;  
Push-in CAGE CLAMP®; 1,50 mm<sup>2</sup>; black



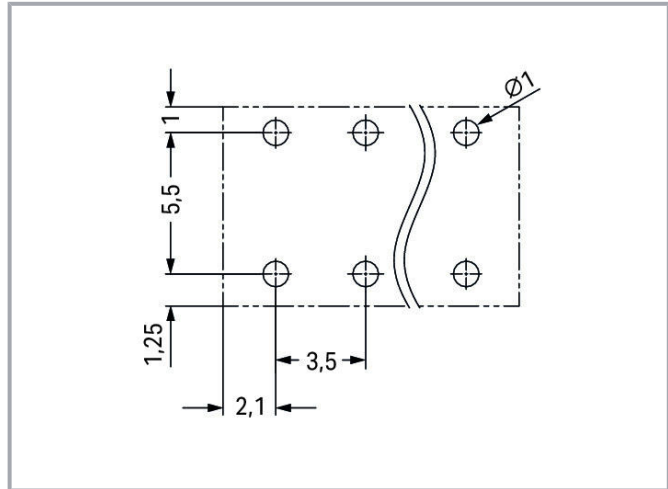
[www.wago.com/2086-1109](http://www.wago.com/2086-1109)



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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Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 4.2 \text{ mm}$

## Item description

- Ideal for compact device connection, panel feedthrough and tight spaces
- Push-in CAGE CLAMP® allows push-in termination of solid and fine-stranded conductors with ferrules
- SMD and THR variants available
- Delivery in tape-and-reel packaging for full integration into SMT soldering process
- Push-button moves in direction of conductor connection
- Conductor connection and mating direction both parallel and perpendicular to the PCB
- Choice of double pin spacing or alternating pin spacing, 3.5 and 5 mm pin spacing

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

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## Data

### Electrical data

#### IEC Approvals

Ratings per	IEC/EN 60664-1
Rated voltage (III / 3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Nominal voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV
Rated current	17.5 A
Legend (ratings)	(III / 2) ≙ 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 C)	300 V
Rated current UL (Use Group C)	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
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

#### Connection data

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	0.14 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor	0.14 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm <sup>2</sup>
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Conductor connection direction to PCB	90°
Number of poles	9

## Physical data

Pin spacing	3.5 mm / 0.138 inch
Width	32.2 mm / 1.268 inch
Height	16 mm / 0.63 inch
Height from the surface	13.6 mm / 0.535 inch
Depth	7.8 mm / 0.307 inch
Solder pin length	2.4 mm
Solder pin dimensions	0.3 x 0.8 mm
Plated through-hole diameter (THR)	1 <sup>(+0.1)</sup> mm

## PCB contact

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

## Material data

Color	black
Insulation material	Polyphthalamide (PPA GF)
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	4.4 g

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

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## Environmental requirements



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


PU (SPU)	96 Stück
Packaging type	BOX
Country of origin	CH
GTIN	4055144089318
Customs tariff number	85369010000

## Approvals / Certificates

### Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>CB</b> DEKRA Certification B.V.	IEC 60947-7-4	NL-74022
	<b>CSA</b> DEKRA Certification B.V.	C22.2	80060692
	<b>KEMA/KEUR</b> DEKRA Certification B.V.	EN 60947-7-4	71- 119449

### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>UL</b> Underwriters Laboratories Inc.	UL 1059	E45172

## Optional accessories

### Ferrules

Ferrule		
1	<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>

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



Item no.: 216-104 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>
Item no.: 216-102 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>
Item no.: 216-103 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>
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	<a href="http://www.wago.com/216-142">www.wago.com/216-142</a>
Item no.: 216-132 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>
Item no.: 216-121 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>
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	<a href="http://www.wago.com/216-143">www.wago.com/216-143</a>
Item no.: 216-131 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>
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	<a href="http://www.wago.com/216-141">www.wago.com/216-141</a>
Item no.: 216-152 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>
Item no.: 216-202 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>
Item no.: 216-151 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>
Item no.: 216-144 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>
Item no.: 216-201 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>
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	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
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	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
Item no.: 216-301 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>
Item no.: 216-302	

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

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)

### Testing accessories

#### Testing accessories



**Item no.: 735-500**

Test pin; 1 mm Ø; with solder connection for test wire

[www.wago.com/735-500](http://www.wago.com/735-500)



**Item no.: 859-500**

Test pin; 1 mm Ø; with solder connection for test wire

[www.wago.com/859-500](http://www.wago.com/859-500)

### Tools

#### Operating tool



**Item no.: 210-719**

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

[www.wago.com/210-719](http://www.wago.com/210-719)

## Downloads

### Documentation

#### Additional Information

Technical explanations	Apr 3, 2019	pdf 2.0 MB	Download
THR Soldering Process		pdf 548.2 kB	Download

### CAD files

#### CAD data

2D/3D Models 2086-1109		URL	Download
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#### CAE data

ZUKEN Portal 2086-1109		URL	Download
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 2086-1109		URL	Download
THR PCB terminal block; push-button; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 9-pole; Push-in CAGE CLAMP®; 1,50 mm <sup>2</sup> ; black			

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## Installation Notes

### Conductor termination



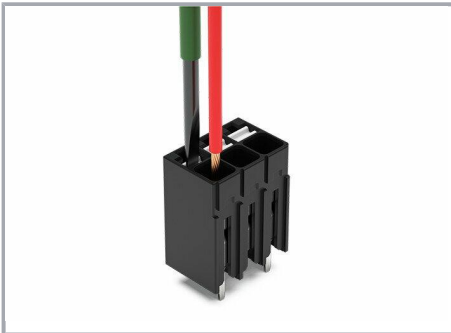
Inserting solid conductor via push-in termination.

### Conductor removal



Removing fine-stranded conductors via push-buttons.

### Conductor termination

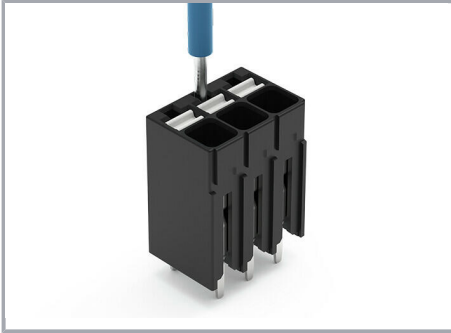


Inserting and removing fine-stranded conductors via push-buttons.

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



### Testing



Testing via 1 mm Ø test pin.

Touch contact with current bar.

### Marking



Pole marking via direct marking  
perpendicular to conductor entry.

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