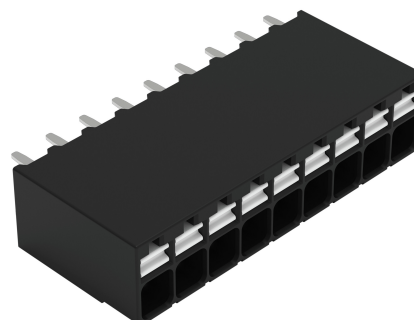
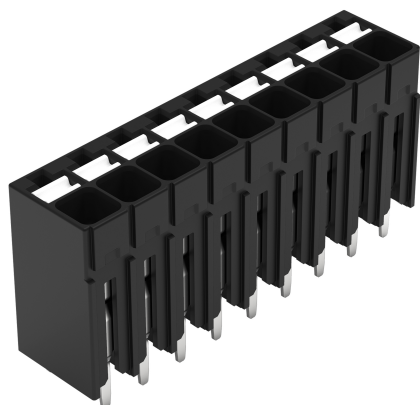


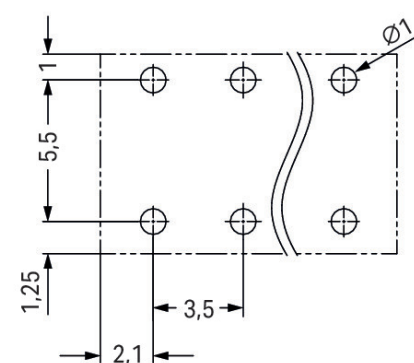
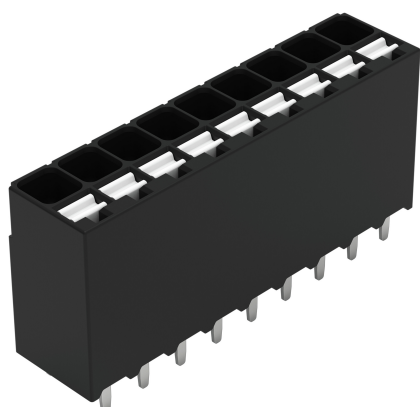
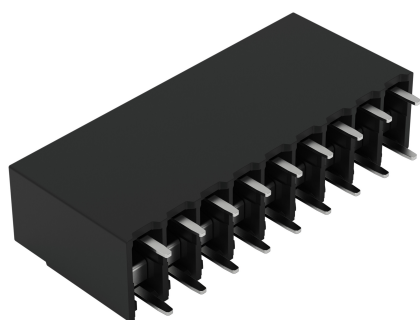
# Data Sheet | Item Number: 2086-1109

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

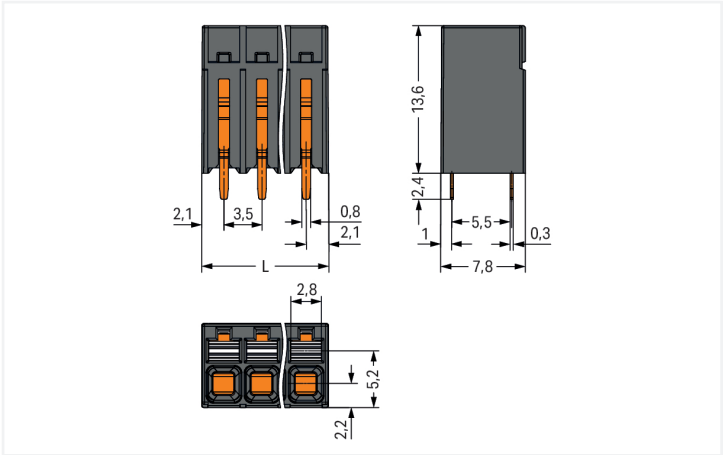
<https://www.wago.com/2086-1109>



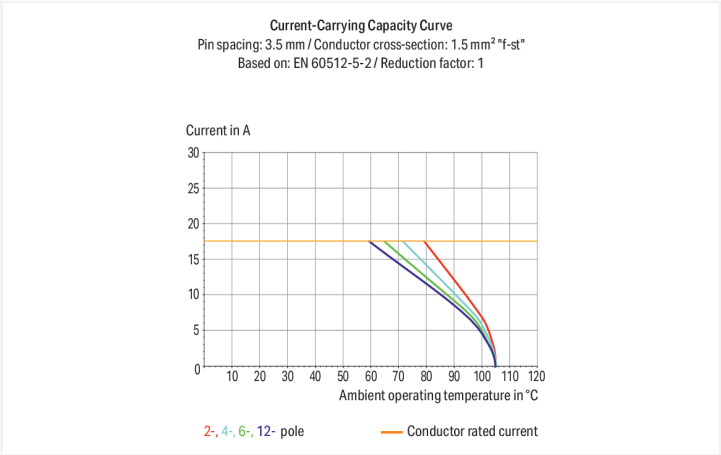
Color: ■ black



Dimensions in mm



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



PCB terminal block, 2086 Series, black

Our PCB terminal block (item number 2086-1109) is the perfect way to connect conductors quickly and securely. It is a universal connector that can be used almost anywhere, for example, as a pluggable PCB connector, panel feedthrough header, connector for rail-mount terminal blocks, or a floating connector for different mounting methods. This PCB terminal block has a rated voltage of 160 V and can handle currents up to 17.5 A, making it ideal for high-load applications. Ensure that the strip lengths are between 8 mm and 9 mm when connecting conductors to this PCB terminal block. This product features one conductor terminal and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. It allows direct insertion of both solid and fine-stranded conductors with ferrules without the need for tools—all thanks to its plug-gable design. Dimensions: 32.2 x 16 x 7.8 mm (width x height x depth). This PCB terminal block is suitable for conductor cross sections ranging from 0.14 mm² to 1.5 mm². It features one level and nine clamping points for connecting nine potentials / 9 poles. The black housing is made of polyphthalamide (PPA GF) for insulation, the clamping spring is made of chrome-nickel spring steel (CrNi), and the contacts are made of electrolytic copper (ECu). Tin is used for coating the contact surfaces. A push-button is used to operate this PCB terminal block. The PCB terminal block is designed for THR soldering. Insert the conductor into the board at an angle of 90°. The solder pins, which are 0.3 x 0.8 mm in cross-section and 2.4 mm long, are laid out over the entire terminal strip (in-line). There are two solder pins per potential.

Notes	
Note	Application notes: Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to application-specific variables (component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.



Electrical data						
Ratings per		IEC/EN 60664-1			Approvals per	
		UL 1059				
Overvoltage category	III	III	II	Use group	B	C
Pollution degree	3	2	2	Rated voltage	300 V	-
Nominal voltage	160 V	160 V	320 V	Rated current	14 A	-
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV			
Rated current	17.5 A	17.5 A	17.5 A			

Approvals per		CSA		
Use group	B	C	D	
Rated voltage	300 V	-	300 V	
Rated current	14 A	-	14 A	

Connection data			
Clamping units	9	Connection 1	
Total number of potentials	9	Connection technology	Push-in CAGE CLAMP®
Number of connection types	1	Actuation type	Push-button
Number of levels	1	Solid conductor	0.14 ... 1.5 mm² / 28 ... 16 AWG
		Fine-stranded conductor	0.14 ... 1.5 mm² / 26 ... 14 AWG
		Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm²
		Fine-stranded conductor; with uninsulated ferrule	0.25 ... 1.5 mm²
		Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
		Conductor connection direction to PCB	90 °
		Pole number	9

Physical data	
Pin spacing	3.5 mm / 0.138 inches
Width	32.2 mm / 1.268 inches
Height	16 mm / 0.63 inches
Height from the surface	13.6 mm / 0.535 inches
Depth	7.8 mm / 0.307 inches
Solder pin length	2.4 mm
Solder pin dimensions	0.3 x 0.8 mm
Plated through-hole diameter (THR)	1 (+0.1) 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		
Note (material data)		<a href="#">Information on material specifications can be found here</a>
Color		black
Material group		I
Insulation material (main housing)		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
Fire load		0.095 MJ
Weight		4.4 g
MSL per J-STD 020D		1

Environmental requirements		
Limit temperature range		-60 ... +105 °C
Processing temperature		-35 ... +60 °C
Continuous operating temperature		-60 ... +105 °C

Commercial data		
PU (SPU)		96 pcs
Packaging type		Box
Country of origin		CH
GTIN		4066966141481
Customs tariff number		85369010000

Product classification		
UNSPSC		39121409
ETIM 9.0		EC002643
ETIM 8.0		EC002643
ECCN		NO US CLASSIFICATION

Environmental Product Compliance		
RoHS Compliance Status		Compliant, No Exemption

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 60947-7-4	NL-74022
CSA CSA Group	C22.2	80060692
KEMA/KEUR DEKRA Certification B.V.	EN 60947-7-4	71-119449
UL Underwriters Laboratories Inc.	UL 1059	E45172



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2086-1109

↓

Documentation

Additional Information

Technical Section	03.04.2019	pdf 2027.26 KB	↓
		pdf 535.32 KB	↓

CAD/CAE-Data















CAD data	CAE data
2D/3D Models 2086-1109	ZUKEN Portal 2086-1109
↓	↓

1 Compatible Products

1.1 Optional Accessories

1.1.1 Ferrule

1.1.1.1 Ferrule

 <a href="#">Item No.: 216-301</a> Ferrule; Sleeve for 0.25 mm² / AWG 24; un-insulated; electro-tin plated; yellow	 <a href="#">Item No.: 216-302</a> Ferrule; Sleeve for 0.34 mm² / 22 AWG; un-insulated; electro-tin plated; light turquoise	 <a href="#">Item No.: 216-201</a> Ferrule; Sleeve for 0.5 mm² / 20 AWG; in-sulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white	 <a href="#">Item No.: 216-241</a> Ferrule; Sleeve for 0.5 mm² / 20 AWG; in-sulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white
 <a href="#">Item No.: 216-141</a> Ferrule; Sleeve for 0.5 mm² / 20 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 <a href="#">Item No.: 216-101</a> Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; electro-tin plated; silver-colored	 <a href="#">Item No.: 216-242</a> Ferrule; Sleeve for 0.75 mm² / 18 AWG; in-sulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	 <a href="#">Item No.: 216-202</a> Ferrule; Sleeve for 0.75 mm² / 18 AWG; in-sulated; electro-tin plated; gray
 <a href="#">Item No.: 216-142</a> Ferrule; Sleeve for 0.75 mm² / 18 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 <a href="#">Item No.: 216-102</a> Ferrule; Sleeve for 0.75 mm² / AWG 20; un-insulated; electro-tin plated; silver-colored	 <a href="#">Item No.: 216-103</a> Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated	 <a href="#">Item No.: 216-143</a> Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92
 <a href="#">Item No.: 216-144</a> Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	 <a href="#">Item No.: 216-104</a> Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; silver-colored		



1.1.2 Test and measurement

1.1.2.1 Testing accessories



**Item No.: 859-500**  
WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 10 mm uninsulated; Test lead for soldering up to 0,5mm²



**Item No.: 735-500**  
WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm²

1.1.3 Tool

1.1.3.1 Operating tool



**Item No.: 210-719**  
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Installation Notes

Conductor termination



Inserting solid conductor via push-in termination.

Conductor termination



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

Conductor removal



Removing a conductor via push-button.

Testing



Testing via 1 mm Ø test pin.  
Touch contact with current bar

Marking



Pole marking via direct marking perpendi-  
cular to conductor entry.