

Data Sheet | Item Number: 2086-1109

THR PCB terminal block; push-button; 1.5 mm²; Pin spacing 3.5 mm; 9-pole; Push-in
CAGE CLAMP®; 1,50 mm²; black

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

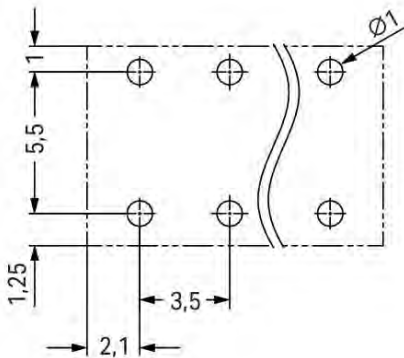
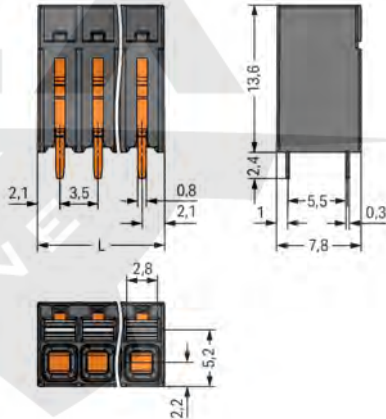
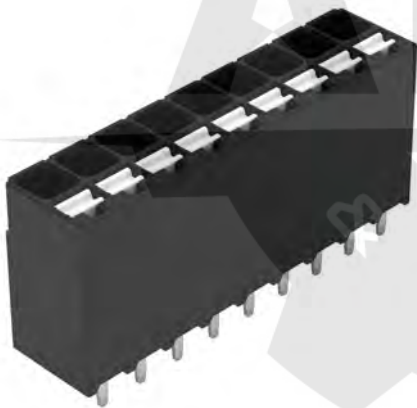
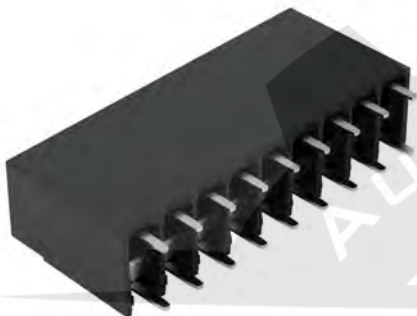


Color: black



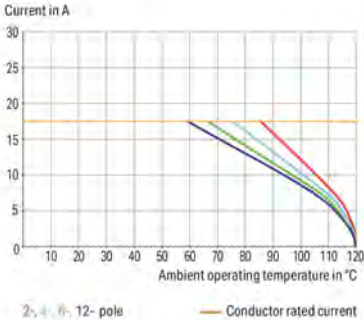
Dimensions in mm

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



Dimensions in mm

Current-Carrying Capacity Curve
Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm² "f-st"
Based on: EN 60512-5-2 / Reduction factor: 1





- Ideal for compact device connection, panel feedthrough and tight spaces
- Push-in CAGE CLAMP® termination of solid and ferruled conductors
- SMD and THR versions available
- Push-button moves parallel to conductor entry
- Conductor connection and mating direction parallel or perpendicular to the PCB
- Optionally available with in-line or staggered pins (3.5 and 5 mm pin spacing)

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		Ratings per UL 1059	
Ratings per	IEC/EN 60664-1	Approvals per	UL 1059
Nominal voltage (III/3)	160 V	Rated voltage UL (Use Group B)	300 V
Rated impulse voltage (III/3)	2.5 kV	Rated current UL (Use Group B)	14 A
Rated voltage (III/2)	160 V	Rated voltage UL (Use Group D)	300 V
Rated impulse voltage (III/2)	2.5 kV	Rated current UL (Use Group D)	10 A
Nominal voltage (II/2)	320 V		
Rated surge voltage (II/2)	2.5 kV		
Rated current	17.5 A		
Legend (ratings)	(III / 2) Δ Overvoltage category III / Pollution degree 2		

Ratings per CSA	
Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	14 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	14 A

Connection data			
Total number of potentials	9	Connection 1	
Number of connection types	1	Connection technology	Push-in CAGE CLAMP®
Number of levels	1	Actuation type	Push-button
		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)	Information on material specifications can be found here
Color	black
Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Electrolytic copper (E _{Cu})
Contact plating	Tin
Fire load	0.121 MJ
Weight	4.4 g

Environmental requirements

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

Commercial data

ETIM 8.0	EC002643
ETIM 7.0	EC002643
PU (SPU)	96 pcs
Country of origin	CH
GTIN	4066966141481
Customs tariff number	85369010000



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 1949.09 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

 Item No.: 216-301 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow	 Item No.: 216-151 Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated	 Item No.: 216-131 Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-302 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise
 Item No.: 216-132 Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated	 Item No.: 216-152 Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated	 Item No.: 216-241 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	 Item No.: 216-201 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white
 Item No.: 216-141 Ferrule; Sleeve for 0.5 mm² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-101 Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-121 Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-242 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray
 Item No.: 216-202 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray	 Item No.: 216-142 Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-102 Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored	 Item No.: 216-133 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated
 Item No.: 216-143 Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92	 Item No.: 216-144 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored	 Item No.: 216-104 Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; 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 perpendicular to conductor entry.

