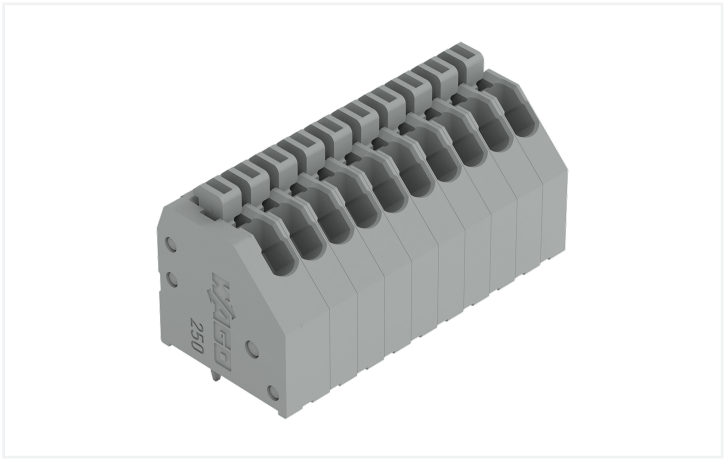
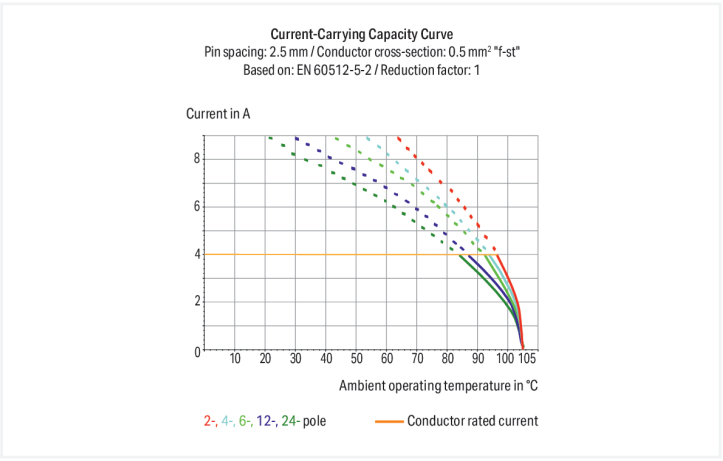
Data Sheet | Item Number: 250-410

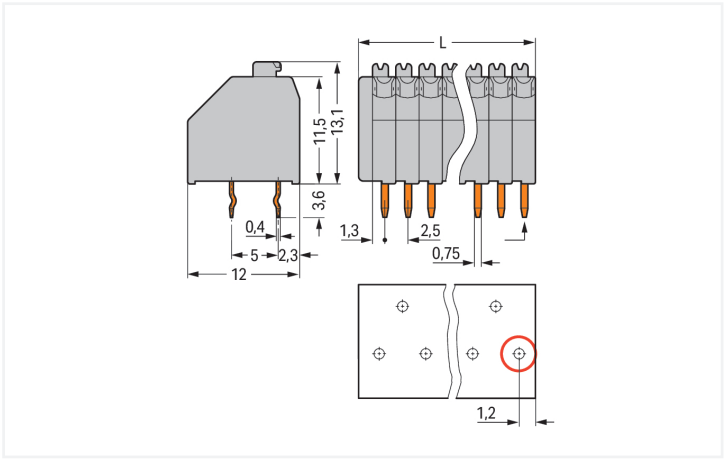
PCB terminal block; push-button; 0.5 mm²; Pin spacing 2.5 mm; 10-pole; Push-in CAGE CLAMP®; gray

https://www.wago.com/250-410





Color: gray



Dimensions in mm
L = (pole no. x pin spacing) + 1.5 mmFirst solder pin, front right (red circle)

PCB terminal block, 250 Series, push-button

Easily, quickly and safely connect conductors with this PCB terminal block (item number 250-410). 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. Strip lengths must be between 8.5 and 9.5 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. Solid and fine-stranded conductors with ferrules can be plugged in without needing to use any tools—all thanks to its pluggable design. The item's dimensions are (26.5 x 16.7 x 12) mm (width x height x depth). This PCB terminal block is suitable for conductor cross-sections ranging from 0.14 mm² to 0.5 mm².

The universal connection for all conductor types – Push-in CAGE CLAMP®

Tin is used for coating the contact surfaces. This PCB terminal block is operated with a push-button. The PCB terminal block is designed for THT soldering. The conductor is designed to be inserted at a 45° angle..

- Permanently secure connections
- Compact sizes
- Number of poles: 10
- Actuation via push-button
- Reliable soldering thanks to THT

Notes

General safety information	**NOTICE: Observe installation and safety instructions!** **To be sold only with installation instructions!**
Variants:	Other pole numbers Other colors Mixed-color PCB connector strips Terminal strips with spacers Direct marking Other versions (or variants) can be requested from WAGO Sales or configured at https://configurator.wago.com/.

Electrical data

Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	160 V	160 V	320 V
Rated impulse withstand voltage	2.5 kV	2.5 kV	2.5 kV
Rated current	4 A	4 A	4 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	5 A	-	5 A

Approvals per	CSA		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	5 A	-	5 A

Connection Data

Clamping units	10
Total number of potentials	10
Number of connection types	1
Number of levels	1

Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Push-button
Solid conductor	0.14 … 0.5 mm² / 24 … 20 AWG
Fine-stranded conductor	0.2 … 0.5 mm² / 24 … 20 AWG
Conductor diameter	0.4 … 0.8 mm / 24 … 20 AWG
Strip length	8.5 … 9.5 mm / 0.33 … 0.37 inches
Conductor connection direction to PCB	45 °
Pole number	10

Physical data

Pin spacing	2.5 mm / 0.098 inches
Width	26.5 mm / 1.043 inches
Height	16.7 mm / 0.657 inches
Height from the surface	13.1 mm / 0.516 inches
Depth	12 mm / 0.472 inches
Solder pin length	3.6 mm
Solder pin dimensions	0.4 x 0.75 mm
Drilled hole diameter	1.1 $^{(+0.1)}$ mm

Continued on next page

PCB contact

PCB contact	THT
Solder pin arrangement	over the entire terminal strip (staggered)
Number of solder pins per potential	1

Material data

Note (material data)	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Copper alloy
Contact Plating	Tin
Fire load	0.075 MJ
Weight	3.7 g

Environmental requirements

Limit temperature range	-60 … +105 °C

Commercial data

Product Group	4 (Printed Circuit Connectors)
PU (SPU)	180 (45) pcs
Packaging type	Box
Country of origin	CH
GTIN	4044918643054
Customs tariff number	85369010000

Product Classification

UNSPSC	39121409
eCl@ss 10.0	27-44-04-01
eCl@ss 9.0	27-44-04-01
ETIM 9.0	EC002643
ETIM 10.0	EC002643
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL-8036
CCA DEKRA Certification B.V.	EN 60998	NTR NL-7705/1

General approvals

CSA DEKRA Certification B.V.	C22.2	1132097
DEKRA DEKRA Certification B.V.	EN 60947-7-4	71-141963
KEMA/KEUR DEKRA Certification B.V.	EN 60947	2160584.18
KEMA/KEUR DEKRA Certification B.V.	EN 60998	71-124629
UL UL International Germany GmbH	UL 1059	E45172

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Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	24-0095975-PDA
DNV DNV GL SE	-	TAE000016Z

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 250-410

Documentation

Safety Data Sheet

Handling and Safety Instructions of PCB Terminal Blocks with Push-In Cage Clamp — pdf, 393.90 KB

Additional Information

Technical Section — 03.04.2019 — pdf, 2027.26 KB

CAD/CAE-Data

CAD data

2D/3D Models 250-410

CAE data

EPLAN Data Portal 250-410

ZUKEN Portal 250-410

PCB Design

Symbol and Footprint via SamacSys 250-410

Symbol and Footprint via Ultra Librarian 250-410

Continued on next page

1 Compatible Products

1.1 Optional Accessories

1.1.1 Marking

1.1.1.1 Marking strip



Item No.: 210-331/250-202
Marking strips; as a DIN A4 sheet; MARKED; 1-16 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-331/250-207
Marking strips; as a DIN A4 sheet; MARKED; 1-48 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-331/250-204
Marking strips; as a DIN A4 sheet; MARKED; 17-32 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white



Item No.: 210-331/250-206
Marking strips; as a DIN A4 sheet; MARKED; 33-48 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive; white

1.1.2 Test and measurement

1.1.2.1 Testing accessories



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

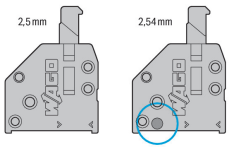


Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



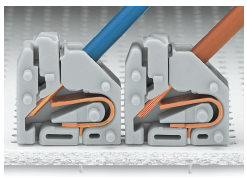
Item No.: 210-647
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

Installation Notes



A groove at the back of the terminal strip differentiates between the two pin spacings.

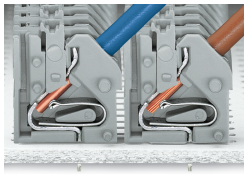
Conductor termination



Inserting solid conductors via push-in termination.
Inserting fine-stranded conductors via push-buttons, 250 Series – 3.5 mm pin spacing.

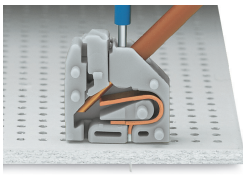
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Conductor termination

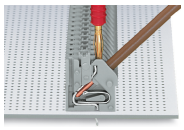


Space-saving wiring, 250 Series – 5 mm pin spacing.

Testing

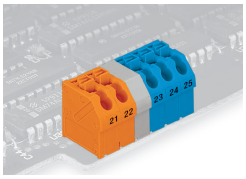


Testing with 11 mm Ø test pin, on the conductor, 250 Series – 2.5 … 3.5 mm pin spacing.

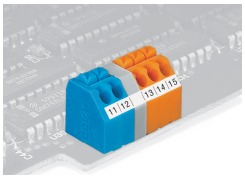


Testing with 2 mm Ø test plug, touch contact, 250 Series – 5 mm pin spacing.

Marking



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.