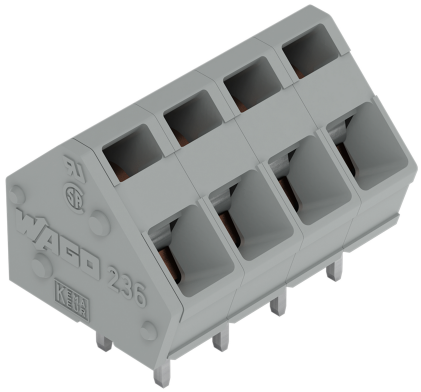
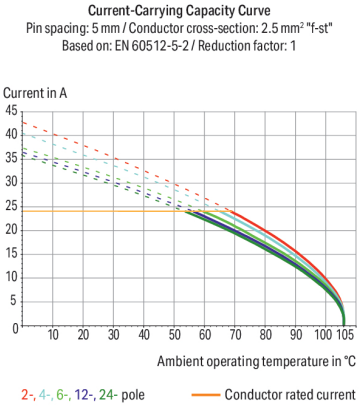
# Data Sheet | Item Number: 236-412

PCB terminal block; 2.5 mm²; Pin spacing 5/5.08 mm; 12-pole; CAGE CLAMP®; commoning option; gray

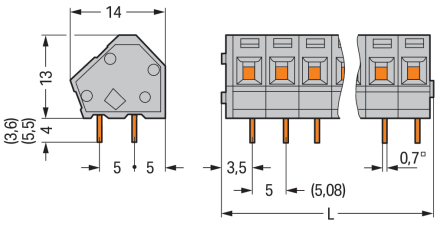
https://www.wago.com/236-412






Color: gray

Similar to illustration




Dimensions in mm
L = (pole no. x pin spacing) + 2.3 mm

PCB terminal block, 236 Series, 45 °conductor entry to board

Connect conductors quickly and securely with this PCB terminal block (item number 236-412). It is perfect for custom installations with different mounting types. Conductors can only be connected to this PCB terminal block if their strip length is between 5 and 6 mm . This product features one conductor terminal and utilizes CAGE CLAMP®. Our renowned universal connection known as CAGE CLAMP® is the industry standard when it comes to connection technology and electrical interconnections. The item's dimensions are (62.3 x 17 x 14) mm (width x height x depth). Depending on the conductor type, this PCB terminal block is ideal for conductor cross sections ranging from 0.08 mm² to 2.5 mm².

Tin is used for coating the contact surfaces. This PCB terminal block is operated with an operating tool. The PCB terminal block is designed for THT soldering. Insert the conductor at a 45° angle..

## Notes

| | |
|---|---|
| Variants: | Other pole numbers<br>Versions for Ex e II and Ex i<br>Other colors<br>Mixed-color PCB connector strips<br>Direct marking<br>Solder pin length: 3.6 mm<br>Solder pin length: 5.5 mm<br>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 | 250 V | 320 V | 630 V |
| Rated impulse withstand voltage | 4 kV | 4 kV | 4 kV |
| Rated current | 24 A | 24 A | 24 A |

| Approvals per | UL 1059 | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 300 V | - | 300 V |
| Rated current | 15 A | - | 10 A |

| Approvals per | CSA | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 300 V | - | 300 V |
| Rated current | 15 A | - | 10 A |

## Connection Data

| | |
|---|---|
| Clamping units | 12 |
| Total number of potentials | 12 |
| Number of connection types | 1 |
| Number of levels | 1 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Solid conductor | 0.08 … 2.5 mm² / 28 … 12 AWG |
| Fine-stranded conductor | 0.08 … 2.5 mm² / 28 … 12 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 … 1.5 mm² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 … 1.5 mm² |
| Note (conductor cross-section) | 12 AWG: THHN, THWN |
| Strip length | 5 … 6 mm / 0.2 … 0.24 inches |
| Conductor connection direction to PCB | 45 ° |
| Pole number | 12 |

## Physical data

| | |
|---|---|
| Pin spacing | 5/5.08 mm / 0.197/0.2 inches |
| Width | 62.3 mm / 2.453 inches |
| Height | 17 mm / 0.669 inches |
| Height from the surface | 13 mm / 0.512 inches |
| Depth | 14 mm / 0.551 inches |
| Solder pin length | 4 mm |
| Solder pin dimensions | 0.7 x 0.7 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 (in-line) |
| Number of solder pins per potential | 2 |

## 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 | Chrome-nickel spring steel (CrNi) |
| Contact material | Electrolytic copper ($E_{Cu}$) |
| Contact Plating | Tin |
| Fire load | 0.136 MJ |
| Weight | 10.7 g |

## Environmental requirements

| | |
|---|---|
| Limit temperature range | -60 … +105 °C |

## Commercial data

| | |
|---|---|
| Product Group | 4 (Printed Circuit Connectors) |
| PU (SPU) | 80 (20) pcs |
| Packaging type | Box |
| Country of origin | CH |
| GTIN | 4044918770668 |
| 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<br>DEKRA Certification B.V. | EN 60947 | 2160584.25 |
| CCA<br>DEKRA Certification B.V. | EN 60947 | NTR NL-7109 |
| CCA<br>DEKRA Certification B.V. | EN 60998 | NTR NL-7195 |

### General approvals

| | | |
|---|---|---|
| UL<br>Underwriters Laboratories Inc. | UL 1059 | UL-US-2406095-1 |


Continued on next page

## Declarations of conformity and manufacturer's declarations

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

## Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| BV<br>Bureau Veritas S.A. | IEC 60998 | 11915/E0 BV |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 236-412

### Documentation

**Additional Information**

| | | |
|---|---|---|
| Technical Section | 03.04.2019 | pdf<br>2027.26 KB |
| Gebrückte Klemmenleisten für Leiterplatten | | pdf<br>303.71 KB |

### CAD/CAE-Data

**CAD data**

2D/3D Models 236-412

**CAE data**

EPLAN Data Portal 236-412

ZUKEN Portal 236-412

**PCB Design**

Symbol and Footprint via SamacSys 236-412

Symbol and Footprint via Ultra Librarian 236-412


Continued on next page

# 1 Compatible Products

## 1.1 Optional Accessories

### 1.1.1 Ferrule

#### 1.1.1.1 Ferrule



Item No.: 216-321
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; silver-colored



Item No.: 216-322
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-152
Ferrule; Sleeve for 0.34 mm² / 22 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-221
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



Item No.: 216-121
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



Item No.: 216-222
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-122
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-223
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-123
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored



Item No.: 216-224
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



Item No.: 216-124
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

### 1.1.2 Marking

#### 1.1.2.1 Marking strip



Item No.: 210-332/500-202
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



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



Item No.: 210-332/500-205
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



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



Item No.: 210-332/500-204
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



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



Item No.: 210-332/500-206
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



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

### 1.1.3 Stickers with operating instructions

#### 1.1.3.1 Stickers with operating instructions



Item No.: 210-191
Stickers for operating instructions; for PCB terminal blocks; 236 Series

 Continued on next page

## 1.1.4 Test and measurement

### 1.1.4.1 Testing accessories



Item No.: 231-127
Testing plug module with contact stud; for 236 Series; Pin spacing 5 mm / 0.197 in; 2,50 mm²; gray



Item No.: 231-128
Testing plug module with contact stud; Pin spacing 5.08 mm / 0.2 in; 2,50 mm²; orange

## 1.1.5 Tool

### 1.1.5.1 Operating tool



Item No.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured



Item No.: 236-335
Operating tool; gray



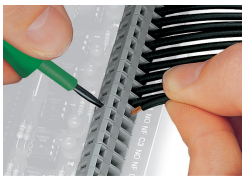
Item No.: 236-332
Operating tool; natural

## Installation Notes

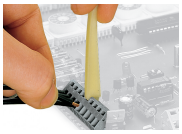
### Conductor termination



Inserting a conductor via 3.5 mm screwdriver.
Screwdriver actuation parallel to conductor entry



Inserting a conductor via 3.5 mm screwdriver.
Screwdriver actuation perpendicular to conductor entry



Inserting a conductor via operating tool.



Compared to standard screwdrivers, these operating tools are far more convenient for wiring PCB terminal strips at factory.

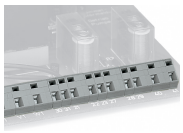
## Installation



PCB Terminal Strips placed behind each other save space – staggering them by half the pin spacing simplifies subsequent wiring of the first row.

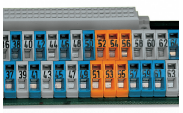

Continued on next page

## Installation



Combining PCB terminal blocks with different pin spacing.

## Marking



Optional: Labeling via factory direct marking.



Optional: Labeling with self-adhesive marking strips possible