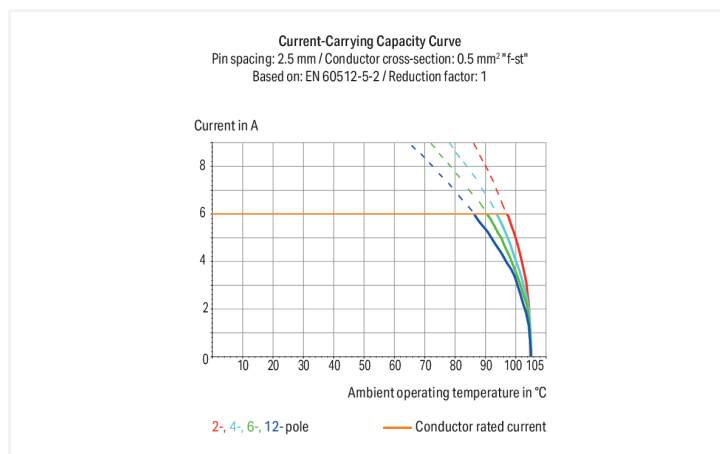


## Data Sheet | Item Number: 233-524

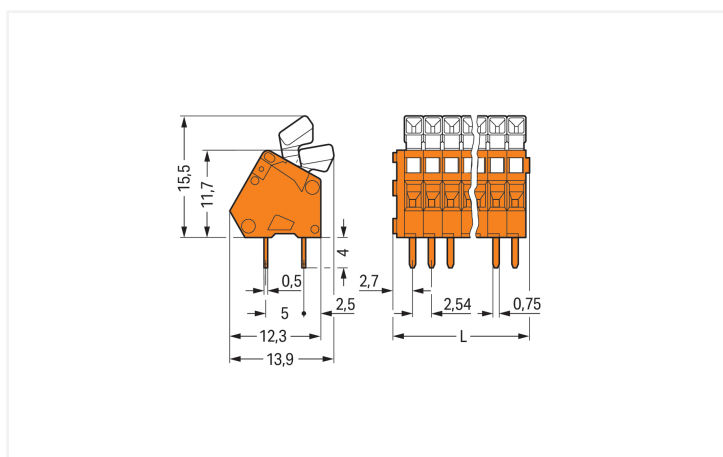
PCB terminal block; push-button; 0.5 mm<sup>2</sup>; Pin spacing 2.54 mm; 24-pole; CAGE CLAMP®; orange

<https://www.wago.com/233-524>



Color: ■ orange

Similar to illustration



Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 2.3 \text{ mm}$

PCB terminal block, 233 Series, push-button

This PCB terminal block (item number 233-524) is designed for simple and secure connections. It is a universal connector that can be used almost anywhere, e. g., as a pluggable PCB connector, panel feedthrough header, connector for rail-mount terminal blocks, or a floating connector for different mounting methods. Conductors should 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 reliable and maintenance-free CAGE CLAMP® connection makes it easy to connect all conductor types without having to prepare the conductor. For example, you don't need to crimp ferrules. Dimensions: (63.26 x 19.5 x 13.9) mm (width x height x depth). Depending on the conductor type, this PCB terminal block is suitable for conductor cross sections ranging from 0.08 mm<sup>2</sup> to 0.5 mm<sup>2</sup>.

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 THT soldering. The conductor is designed to be inserted into the board at a 30° angle..



| Notes     |                                                                                                                                                                                                                                                          |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variants: | Other pole numbers<br>Other colors<br>Mixed-color PCB connector strips<br>Direct marking<br>Other versions (or variants) can be requested from WAGO Sales or configured at <a href="https://configurator.wago.com/">https://configurator.wago.com/</a> . |

| Electrical data                 |  |                |        |        |
|---------------------------------|--|----------------|--------|--------|
| Ratings per                     |  | IEC/EN 60664-1 |        |        |
| Overvoltage category            |  | III            | III    | II     |
| Pollution degree                |  | 3              | 2      | 2      |
| Nominal voltage                 |  | 63 V           | 160 V  | 320 V  |
| Rated impulse withstand voltage |  | 2.5 kV         | 2.5 kV | 2.5 kV |
| Rated current                   |  | 6 A            | 6 A    | 6 A    |
| Approvals per                   |  | UL 1059        |        |        |
| Use group                       |  | B              | C      | D      |
| Rated voltage                   |  | 150 V          | -      | -      |
| Rated current                   |  | 4 A            | -      | -      |
| Approvals per                   |  | CSA            |        |        |
| Use group                       |  | B              | C      | D      |
| Rated voltage                   |  | 150 V          | -      | -      |
| Rated current                   |  | 4 A            | -      | -      |

| Connection Data                                   |    |                                                                                                                                                                  |
|---------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clamping units                                    | 24 |                                                                                                                                                                  |
| Total number of potentials                        | 24 |                                                                                                                                                                  |
| Number of connection types                        | 1  |                                                                                                                                                                  |
| Number of levels                                  | 1  |                                                                                                                                                                  |
| Connection 1                                      |    |                                                                                                                                                                  |
| Connection technology                             |    | CAGE CLAMP®                                                                                                                                                      |
| Actuation type                                    |    | Push-button                                                                                                                                                      |
| Solid conductor                                   |    | 0.08 ... 0.5 mm² / 28 ... 20 AWG                                                                                                                                 |
| Fine-stranded conductor                           |    | 0.08 ... 0.5 mm² / 28 ... 20 AWG                                                                                                                                 |
| Fine-stranded conductor; with insulated ferule    |    | 0.25 mm²                                                                                                                                                         |
| Fine-stranded conductor; with uninsulated ferrule |    | 0.25 mm²                                                                                                                                                         |
| Note (conductor cross-section)                    |    | Terminating 0.75 mm²/18 AWG conductors is possible; however insulation diameter allows only every other clamping unit to be terminated with this conductor size. |
| Strip length                                      |    | 5 ... 6 mm / 0.2 ... 0.24 inches                                                                                                                                 |
| Conductor connection direction to PCB             |    | 30 °                                                                                                                                                             |
| Pole number                                       |    | 24                                                                                                                                                               |

| Physical data           |                         |
|-------------------------|-------------------------|
| Pin spacing             | 2.54 mm / 0.1 inches    |
| Width                   | 63.26 mm / 2.491 inches |
| Height                  | 19.5 mm / 0.768 inches  |
| Height from the surface | 15.5 mm / 0.61 inches   |
| Depth                   | 13.9 mm / 0.547 inches  |
| Solder pin length       | 4 mm                    |
| Solder pin dimensions   | 0.5 x 0.75 mm           |
| Drilled hole diameter   | 1.1 (+0.1) mm           |

| 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)               |  | <a href="#">Information on material specifications can be found here</a> |
| Color                              |  | orange                                                                   |
| 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 <sub>Cu</sub> )                                   |
| Contact Plating                    |  | Tin                                                                      |
| Fire load                          |  | 0.147 MJ                                                                 |
| Weight                             |  | 9.6 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                  |  | 4045454050610                  |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                  | General approvals             |              |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------|-------------------------------|--------------|-----------|
| <div><div></div></div> |              |                  | CSA                           | C22.2        | 1465035   |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                  | DEKRA Certification B.V.      |              |           |
| CCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                  | KEMA/KEUR                     | EN 60947-7-4 | 71-111040 |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                  | DEKRA Certification B.V.      |              |           |
| CCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                  | UL                            | UL 1059      | E45172    |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                  | UL International Germany GmbH |              |           |
| Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Standard     | Certificate Name |                               |              |           |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EN 60998     | NTR NL 6946      |                               |              |           |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EN 60998     | 2153951.01       |                               |              |           |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EN 60947-7-4 | NTR NL 7786      |                               |              |           |



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 |
| ABS<br>American Bureau of Ship-<br>ping                                                                                                                                                                                                                  | -         | 24-0095975-PDA   |
| BV<br>Bureau Veritas S.A.                                                                                                                                                                                                                                | IEC 60998 | 11915/E0 BV      |
| DNV<br>DNV GL SE                                                                                                                                                                                                                                         | -         | TAE000016Z       |

Downloads

Environmental Product Compliance

| Compliance Search                                                                 |
|-----------------------------------------------------------------------------------|
| Environmental Product<br>Compliance 233-524                                       |
|  |

Documentation

| Additional Information                                                              |
|-------------------------------------------------------------------------------------|
| Technical Section                                                                   |
| 03.04.2019                                                                          |
| pdf<br>2027.26 KB                                                                   |
|  |

CAD/CAE-Data

| CAD data                                                                            |
|-------------------------------------------------------------------------------------|
| 2D/3D Models 233-524                                                                |
|  |

| CAE data                                                                              |
|---------------------------------------------------------------------------------------|
| EPLAN Data Portal<br>233-524                                                          |
|  |
| ZUKEN Portal 233-524                                                                  |
|  |

| PCB Design                                                                          |
|-------------------------------------------------------------------------------------|
| Symbol and Footprint via<br>SamacSys 233-524                                        |
|  |
| Symbol and Footprint via<br>Ultra Librarian 233-524                                 |
|  |

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 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-151

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored

1.1.2 Marking

1.1.2.1 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.: 210-331/254-202

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.: 210-331/254-207

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.: 210-331/254-204

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



Item No.: 210-331/254-206

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

1.1.3 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

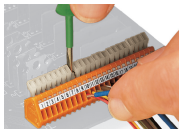


Item No.: 210-648

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

Installation Notes

Conductor termination



Inserting/removing a conductor.

Nominal cross-section: 0.5 mm<sup>2</sup> (20 AWG), 0.75 mm<sup>2</sup> (18 AWG) only in every other position



Marking



Labeling via self-adhesive marking strips or  
factory direct marking.