

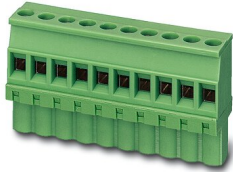
# PCB connector - MVSTBW 2,5/14-ST

1792647

<https://www.phoenixcontact.com/us/products/1792647>



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PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MVSTBW 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

## Your advantages

- Well-known connection principle allows worldwide use
- Allows connection of two conductors
- Low temperature rise, thanks to maximum contact force

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## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1792647             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 50 pc               |
| Sales Key                            | A01                 |
| Product Key                          | AACAJH              |
| Catalog Page                         | Page 267 (C-1-2013) |
| GTIN                                 | 4017918045074       |
| Weight per Piece (including packing) | 30.54 g             |
| Weight per Piece (excluding packing) | 28.374 g            |
| Customs tariff number                | 85366990            |
| Country of origin                    | DE                  |

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## Technical Data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Type                  | Standard              |
| Product line          | COMBICON Connectors M |
| Product type          | PCB plug              |
| Number of positions   | 14                    |
| Pitch                 | 5 mm                  |
| Number of connections | 14                    |
| Number of rows        | 1                     |
| Mounting flange       | without               |
| Number of potentials  | 14                    |

### Electrical properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 12 A   |
| Nominal voltage $U_N$       | 320 V  |
| Pollution degree            | 3      |
| Contact resistance          | 2.5 mΩ |
| Rated voltage (III/3)       | 250 V  |
| Rated surge voltage (III/3) | 4 kV   |
| Rated voltage (III/2)       | 320 V  |
| Rated surge voltage (III/2) | 4 kV   |

### Connection data

#### Connection technology

|                       |                     |
|-----------------------|---------------------|
| Connector system      | COMBICON MSTB 2,5   |
| Nominal cross section | 2.5 mm <sup>2</sup> |
| Type of contact       | Female connector    |

#### Interlock

|                 |         |
|-----------------|---------|
| Locking type    | without |
| Mounting flange | without |

#### Conductor connection

|                                                                       |                                              |
|-----------------------------------------------------------------------|----------------------------------------------|
| Connection method                                                     | Screw connection with tension sleeve         |
| Conductor/PCB connection direction                                    | -90 °                                        |
| Conductor cross section solid                                         | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section flexible                                      | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG                                           | 24 ... 12                                    |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| 2 conductors with same cross section, solid                           | 0.2 mm <sup>2</sup> ... 1 mm <sup>2</sup>    |
| 2 conductors with same cross section, flexible                        | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |

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|                                                                                           |                          |
|-------------------------------------------------------------------------------------------|--------------------------|
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.25 mm² ... 1 mm²       |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 1.5 mm²      |
| Cylindrical gauge a x b / diameter                                                        | 2.8 mm x 2.0 mm / 2.4 mm |
| Stripping length                                                                          | 7 mm                     |
| Torque                                                                                    | 0.5 Nm ... 0.6 Nm        |

## Material specifications

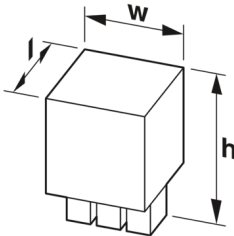
### Material data - contact

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| Note                                     | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material                         | Cu alloy                                                                         |
| Surface characteristics                  | hot-dip tin-plated                                                               |
| Metal surface terminal point (top layer) | Tin (4 - 8 µm Sn)                                                                |
| Metal surface contact area (top layer)   | Tin (4 - 8 µm Sn)                                                                |

### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Housing color                                                     | green (6021) |
| Insulating material                                               | PA           |
| Insulating material group                                         | I            |
| CTI according to IEC 60112                                        | 600          |
| Flammability rating according to UL 94                            | V0           |
| Glow wire flammability index GWFI according to EN 60695-2-12      | 850          |
| Glow wire ignition temperature GWIT according to EN 60695-2-13    | 775          |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C       |

## Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Pitch               | 5 mm                                                                                 |
| Width [w]           | 70 mm                                                                                |
| Height [h]          | 26 mm                                                                                |
| Length [l]          | 12.5 mm                                                                              |
| Installed height    | 26 mm                                                                                |

## Mounting

|                       |             |
|-----------------------|-------------|
| Drive form screw head | Slotted (L) |
|-----------------------|-------------|

# PCB connector - MVSTBW 2,5/14-ST



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## Notes

|                    |                                                                                                                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Mechanical tests

### Test for conductor damage and slackening

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result        | Test passed         |

### Pull-out test

|                                                                             |                                         |
|-----------------------------------------------------------------------------|-----------------------------------------|
| Specification                                                               | IEC 60999-1:1999-11                     |
| Conductor cross section/conductor type/tractive force setpoint/actual value | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|                                                                             | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|                                                                             | 2.5 mm <sup>2</sup> / solid / > 50 N    |
|                                                                             | 2.5 mm <sup>2</sup> / flexible / > 50 N |

### Insertion and withdrawal forces

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 25          |
| Insertion strength per pos. approx. | 8 N         |
| Withdraw strength per pos. approx.  | 6 N         |

### Torque test

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

### Contact holder in insert

|                                             |                        |
|---------------------------------------------|------------------------|
| Specification                               | IEC 60512-15-1:2008-05 |
| Contact holder in insert Requirements >20 N | Test passed            |

### Resistance of inscriptions

|               |                        |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result        | Test passed            |

### Polarization and coding

|               |                        |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result        | Test passed            |

### Visual inspection

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result        | Test passed           |

### Dimension check

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result        | Test passed           |

# PCB connector - MVSTBW 2,5/14-ST



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## Environmental and real-life conditions

### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:2007-12  |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Sweep speed            | 5g (60.1 - 150 Hz)     |
| Test duration per axis | 2.5 h                  |

### Durability test

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level       | 4.8 kV                |
| Contact resistance $R_1$                     | 2.5 mΩ                |
| Contact resistance $R_2$                     | 2.5 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### Climatic test

|                                   |                                                                           |
|-----------------------------------|---------------------------------------------------------------------------|
| Specification                     | ISO 6988:1985-02                                                          |
| Corrosive stress                  | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 100 °C/168 h                                                              |
| Power-frequency withstand voltage | 2.21 kV                                                                   |

### Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                       |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |

## Electrical tests

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 24                    |

### Insulation resistance

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### Air clearances and creepage distances |

|                                        |                     |
|----------------------------------------|---------------------|
| Specification                          | IEC 60664-1:2007-04 |
| Insulating material group              | I                   |
| Comparative tracking index (IEC 60112) | CTI 600             |
| Rated insulation voltage (III/3)       | 250 V               |
| Rated surge voltage (III/3)            | 4 kV                |

# PCB connector - MVSTBW 2,5/14-ST



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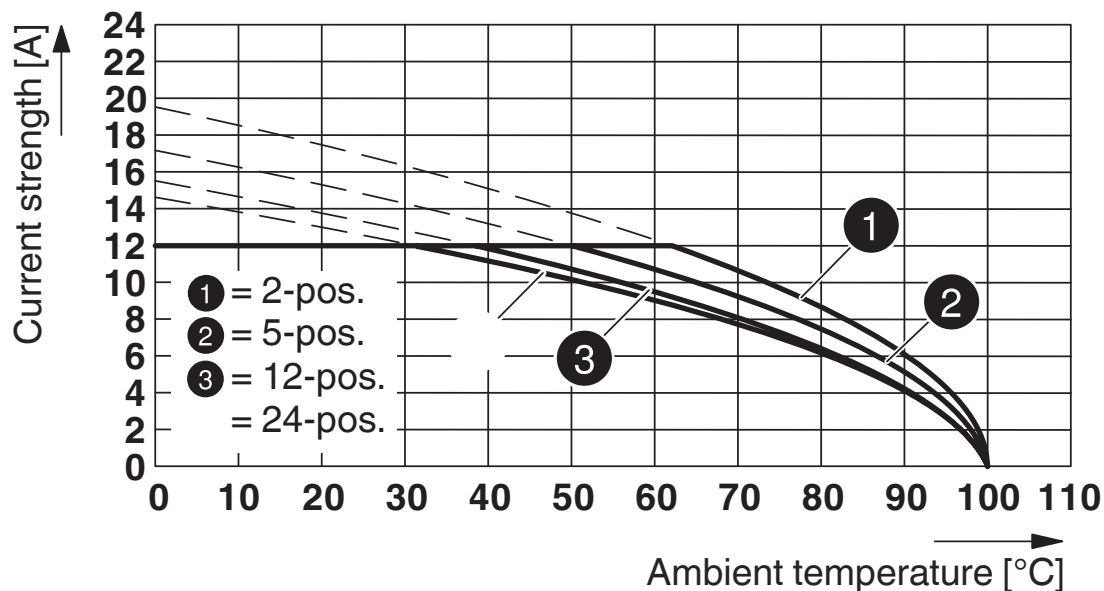
|                                                        |        |
|--------------------------------------------------------|--------|
| minimum clearance value - non-homogenous field (III/3) | 3 mm   |
| minimum creepage distance (III/3)                      | 3.2 mm |
| Rated insulation voltage (III/2)                       | 320 V  |
| Rated surge voltage (III/2)                            | 4 kV   |
| minimum clearance value - non-homogenous field (III/2) | 3 mm   |
| minimum creepage distance (III/2)                      | 3 mm   |
| Rated insulation voltage (II/2)                        | 630 V  |
| Rated surge voltage (II/2)                             | 4 kV   |
| minimum clearance value - non-homogenous field (II/2)  | 3 mm   |
| minimum creepage distance (II/2)                       | 3.2 mm |

## Packaging specifications

|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

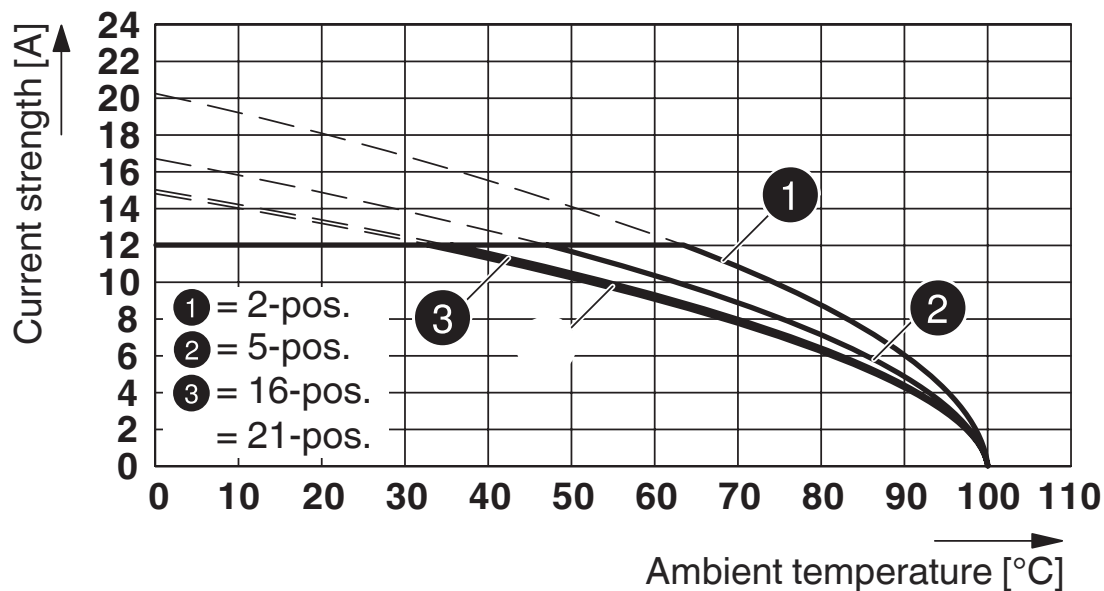
## Drawings

Diagram



Type: MVSTB(R/W) 2,5/...-ST with MSTB 2,5/...-G

Diagram



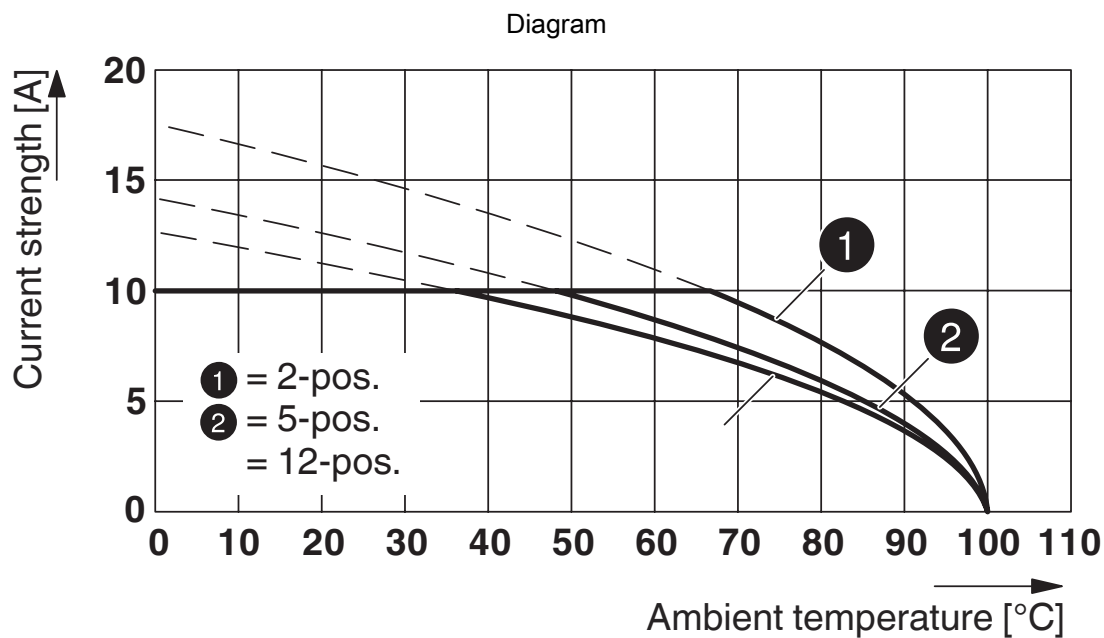
Type: MVSTB(R/W) 2,5/...-ST with MSTBW 2,5/...-G



# PCB connector - MVSTBW 2,5/14-ST

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Type: MVSTB(R/W) 2,5/...-ST with MDSTBW 2,5/...-G

# PCB connector - MVSTBW 2,5/14-ST



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## Approvals

|  <b>CSA</b><br>Approval ID: LR13631-2585950 |                       |                       |                   |                             |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                              | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
| Use group B                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                              | 300 V                 | 10 A                  | 28 - 12           | -                           |
| Use group D                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                              | 300 V                 | 10 A                  | 28 - 12           | -                           |

|  <b>IECEE CB Scheme</b><br>Approval ID: DE1-60988-B1B2 |                       |                       |                   |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                         | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|                                                                                                                                         | 250 V                 | 12 A                  | -                 | 0.2 - 2.5                   |

|  <b>EAC</b><br>Approval ID: B.01687 |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|  <b>cULus Recognized</b><br>Approval ID: E60425-19931011 |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                             | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
| Use group B                                                                                                                                 |                       |                       |                   |                             |
|                                                                                                                                             | 300 V                 | 15 A                  | 30 - 12           | -                           |
| Use group D                                                                                                                                 |                       |                       |                   |                             |
|                                                                                                                                             | 300 V                 | 10 A                  | 30 - 12           | -                           |

|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40004701 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                            | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|                                                                                                                                            | 250 V                 | 12 A                  | -                 | 0.2 - 2.5                   |

# PCB connector - MVSTBW 2,5/14-ST



1792647

<https://www.phoenixcontact.com/us/products/1792647>

## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27440309 |
| ECLASS-10.0.1 | 27440309 |
| ECLASS-11.0   | 27460202 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC002638 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

# PCB connector - MVSTBW 2,5/14-ST



1792647

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## Environmental Product Compliance

|            |                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                               |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                               |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

# PCB connector - MVSTBW 2,5/14-ST



1792647

<https://www.phoenixcontact.com/us/products/1792647>

## Accessories

### Marker card

Marker card - SK 5/3,8:UNBEDRUCKT - 0805409

<https://www.phoenixcontact.com/us/products/0805409>

Marker card, white, unlabeled, can be labeled with: Marker pen, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm



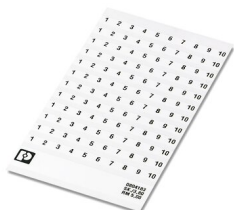
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### Marker card

Marker card - SK 5/3,8:FORTL.ZAHLEN - 0804183

<https://www.phoenixcontact.com/us/products/0804183>

Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm



# PCB connector - MVSTBW 2,5/14-ST



1792647

<https://www.phoenixcontact.com/us/products/1792647>

## Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/us/products/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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## Screwdriver

Screwdriver - SZS 0,6X3,5 - 1205053

<https://www.phoenixcontact.com/us/products/1205053>



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

# PCB connector - MVSTBW 2,5/14-ST



1792647

<https://www.phoenixcontact.com/us/products/1792647>

## Coding section

Coding section - CR-MSTB - 1734401

<https://www.phoenixcontact.com/us/products/1734401>

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



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## Coding profile

Coding profile - CP-MSTB - 1734634

<https://www.phoenixcontact.com/us/products/1734634>

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



# PCB connector - MVSTBW 2,5/14-ST



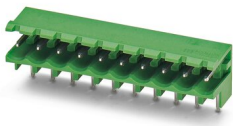
1792647

<https://www.phoenixcontact.com/us/products/1792647>

## PCB header

PCB header - MSTBW 2,5/14-G - 1735992

<https://www.phoenixcontact.com/us/products/1735992>

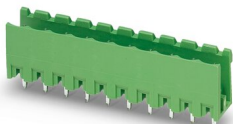


PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MSTBW 2,5/...-G, pitch: 5 mm, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

## PCB header

PCB header - MSTBV 2,5/14-G - 1753673

<https://www.phoenixcontact.com/us/products/1753673>



PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MSTBV 2,5/...-G, pitch: 5 mm, pin layout: Linear pinning, solder pin [P]: 3.9 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

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