

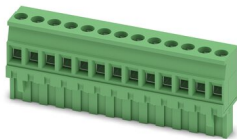
# MVSTBR 2,5/13-ST-5,08 - PCB connector



1792359

<https://www.phoenixcontact.com/us/products/1792359>

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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, contact connection type: Socket, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: MVSTBR 2,5/...-ST, pitch: 5.08 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
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1792359             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 50 pc               |
| Sales key                            | AA03                |
| Product key                          | AACAKC              |
| Catalog page                         | Page 266 (C-1-2013) |
| GTIN                                 | 4017918044831       |
| Weight per piece (including packing) | 28.33 g             |
| Weight per piece (excluding packing) | 26.293 g            |
| Customs tariff number                | 85366990            |
| Country of origin                    | DE                  |

# MVSTBR 2,5/13-ST-5,08 - PCB connector



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## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Type                  | Standard              |
| Product line          | COMBICON Connectors M |
| Product type          | PCB connector         |
| Product family        | MVSTBR 2,5/..-ST      |
| Number of positions   | 13                    |
| Pitch                 | 5.08 mm               |
| Number of connections | 13                    |
| Number of rows        | 1                     |
| Mounting flange       | without               |
| Number of potentials  | 13                    |

### Electrical properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 12 A   |
| Nominal voltage $U_N$       | 320 V  |
| Degree of pollution         | 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   |
| Rated voltage (II/2)        | 630 V  |
| Rated surge voltage (II/2)  | 4 kV   |

### Connection data

#### Connection technology

|                         |                   |
|-------------------------|-------------------|
| Connector system        | COMBICON MSTB 2,5 |
| Nominal cross section   | 2.5 mm²           |
| Contact connection type | Socket            |

#### Interlock

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

#### Conductor connection

|   |                                      |
|---|--------------------------------------|
| Connection method   | Screw connection with tension sleeve |
| Conductor/PCB connection direction                                    | 90 °                                 |
| Conductor cross section rigid   | 0.2 mm² ... 2.5 mm²                  |
| Conductor cross section flexible                                      | 0.2 mm² ... 2.5 mm²                  |
| Conductor cross section AWG   | 24 ... 12                            |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 2.5 mm²                 |

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

## Material specifications

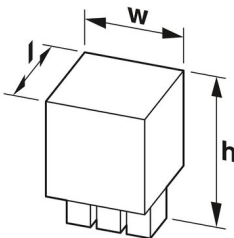
### Material data - contact

|  |  |
|--|--|
| 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

|   |              |
|---|--------------|
| Color (Housing)   | 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               | 5.08 mm  |
| Width [w]           | 66.04 mm   |
| Height [h]          | 26 mm  |
| Length [l]          | 12.5 mm  |

# MVSTBR 2,5/13-ST-5,08 - PCB connector



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## Mounting

|                       |                                      |
|-----------------------|--------------------------------------|
| Drive form screw head | Slotted (L)                          |
| Connection method     | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L)                          |

## 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 |
|---------------|---------------------|

### 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           |

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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 Hz ... 60.1 Hz) |
| Sweep speed            | 5g (60.1 Hz ... 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 | 12                    |

### 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                |

# MVSTBR 2,5/13-ST-5,08 - PCB connector



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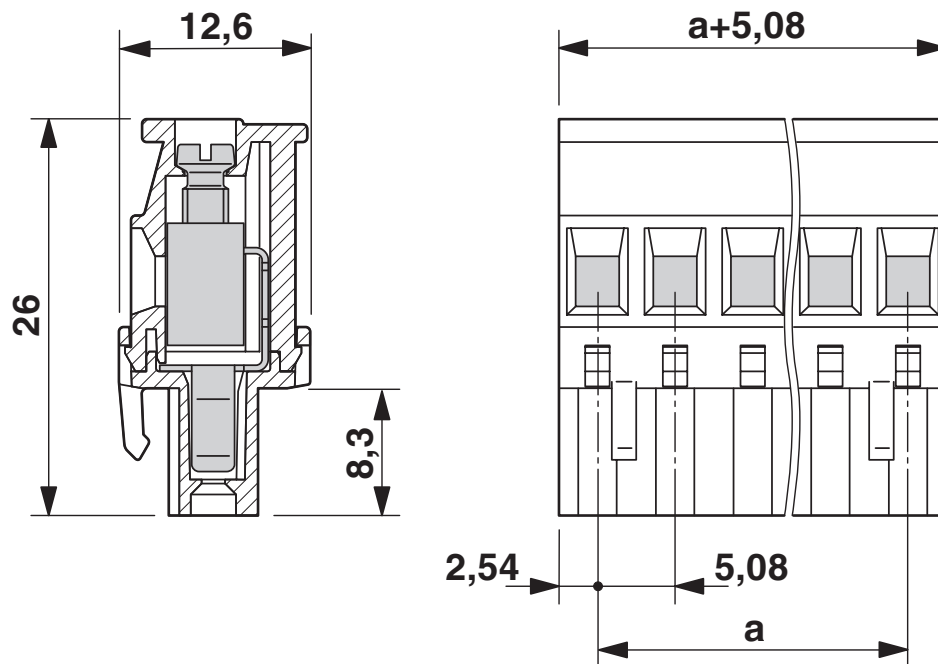
|  |        |
|--|--------|
| minimum clearance value - non-homogenous field (III/3) | 3 mm   |
| minimum creepage distance (III/3)                      | 3.2 mm |
| Rated insulation voltage (III/2)                       | 320 V  |
| Rated surge voltage (III/2)                            | 4 kV   |
|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

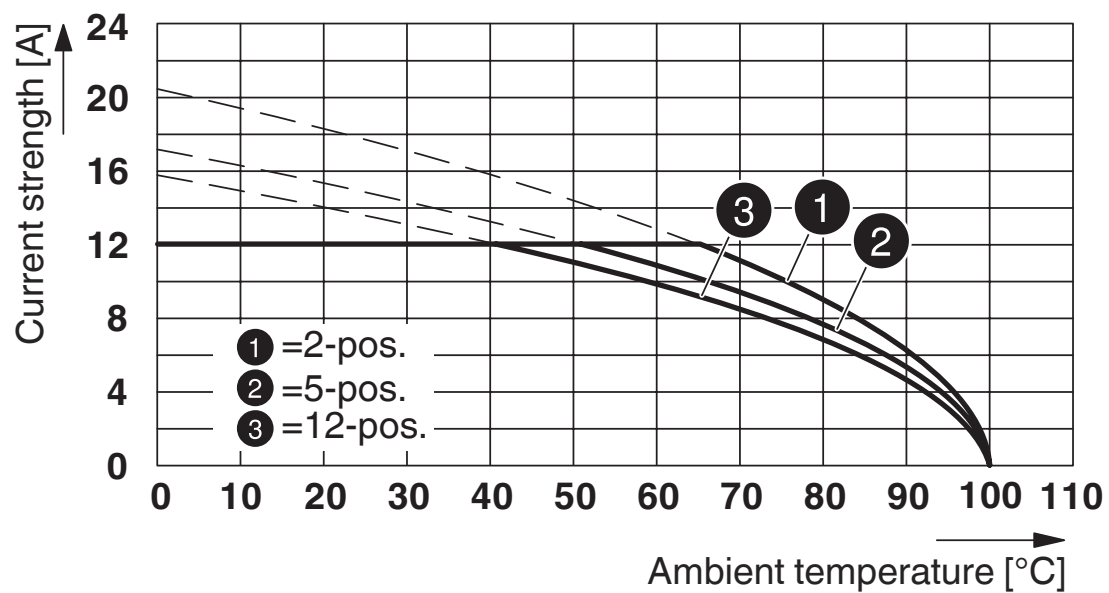
|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

## Drawings

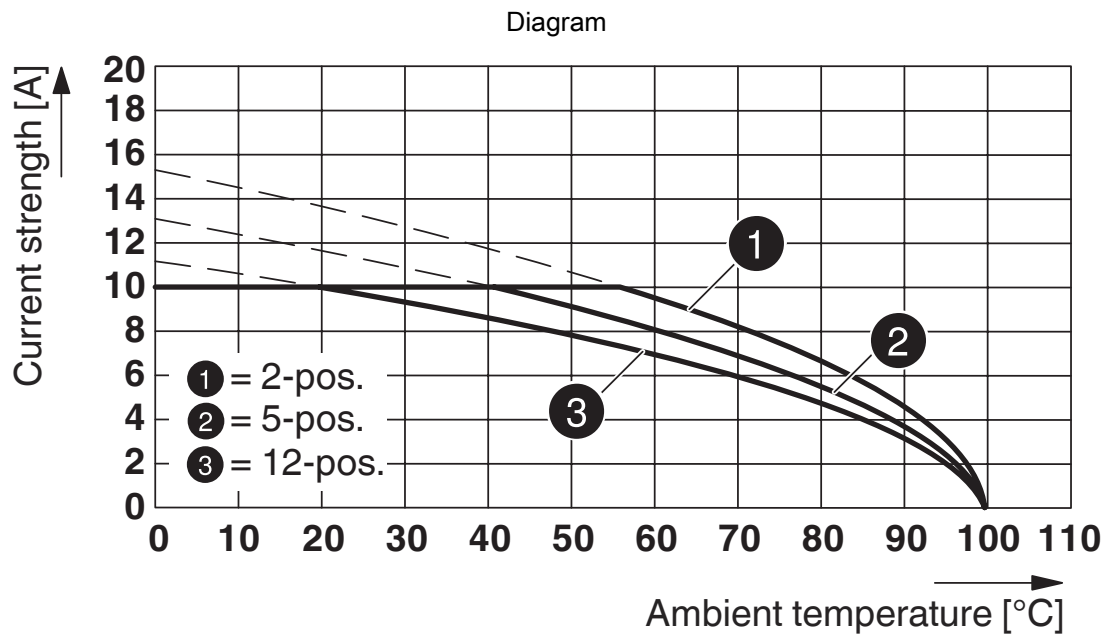
Dimensional drawing



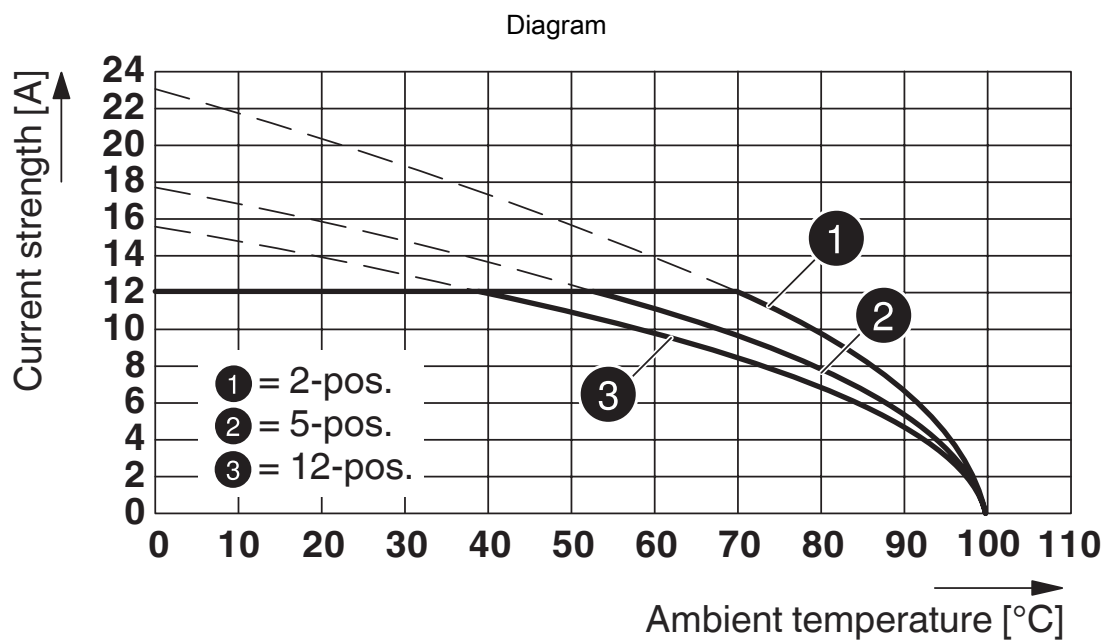
Diagram



Type: MVSTBR 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

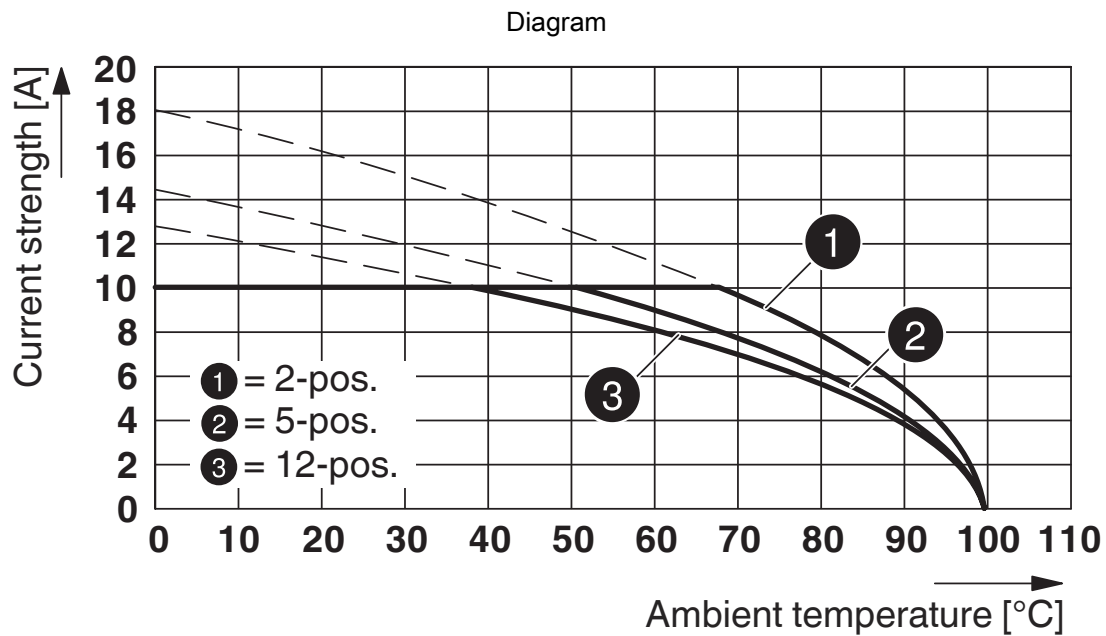


Type: MVSTB(R/W) 2,5/...-ST with MDSTBV 2,5/...-G-5,08

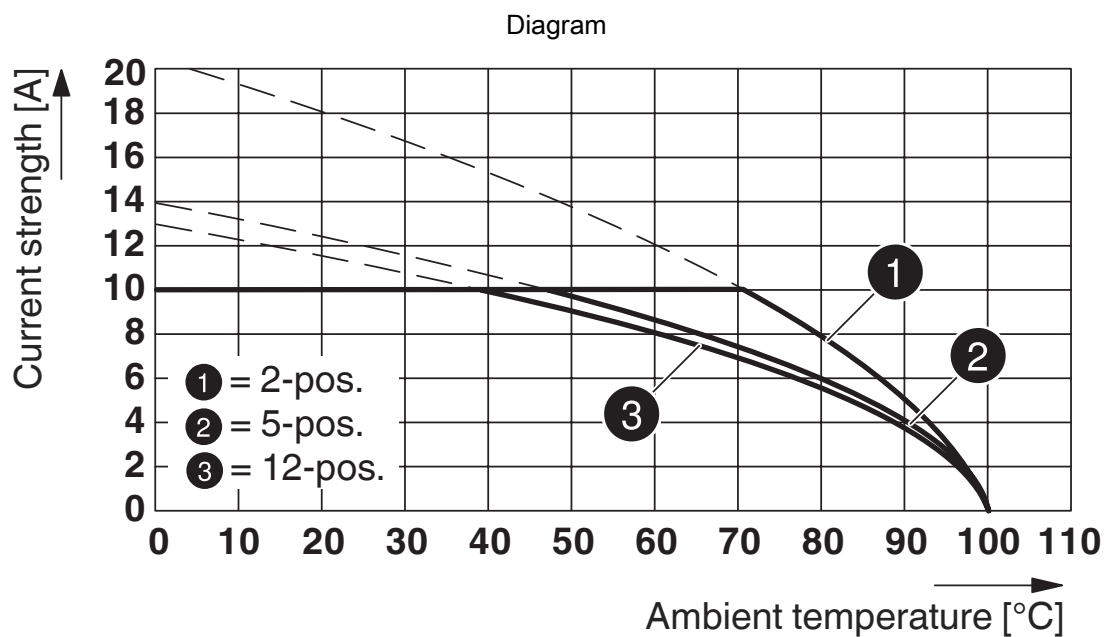


Type: MVSTBR 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P26THR

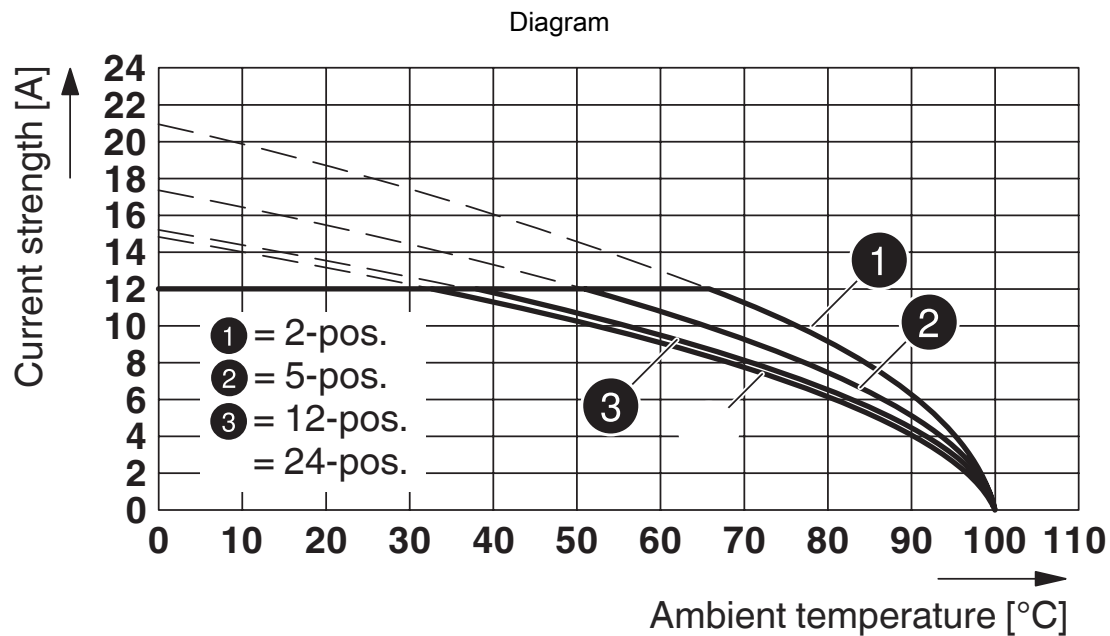




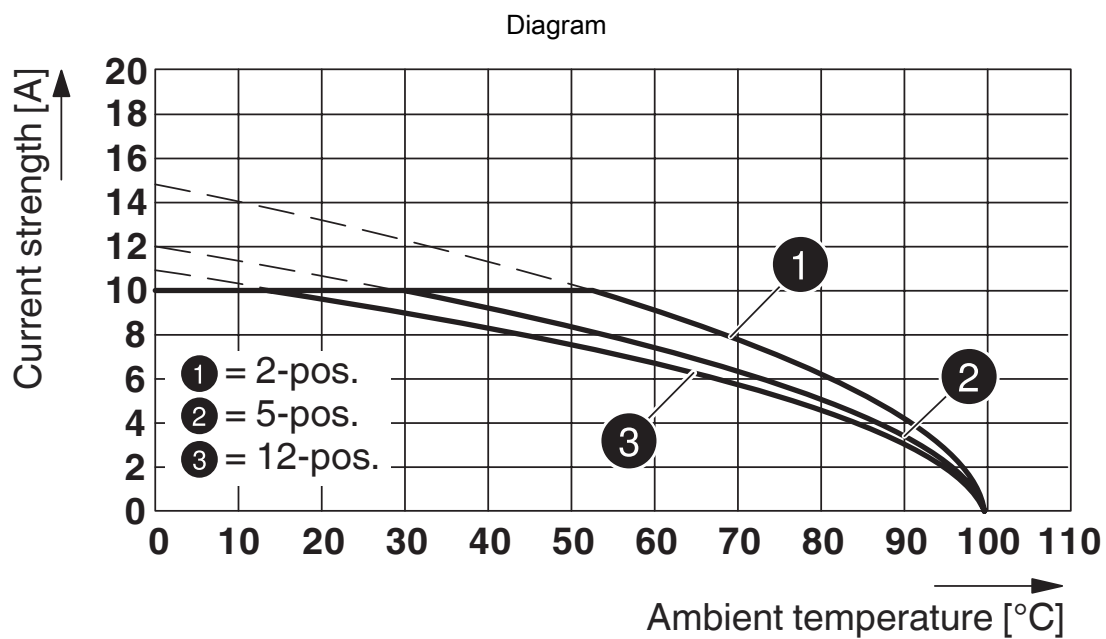
Type: MVSTB(R/W) 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08



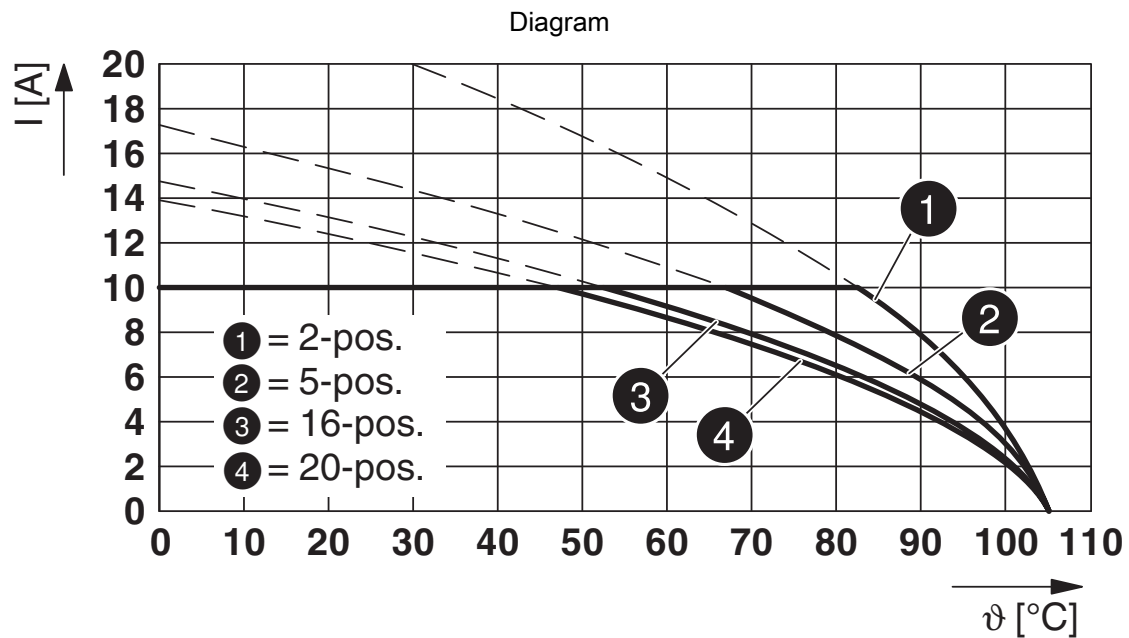
Type: MVSTB(R/W) 2,5/...-ST-5,08 with MDSTBW 2,5/...-G-5,08



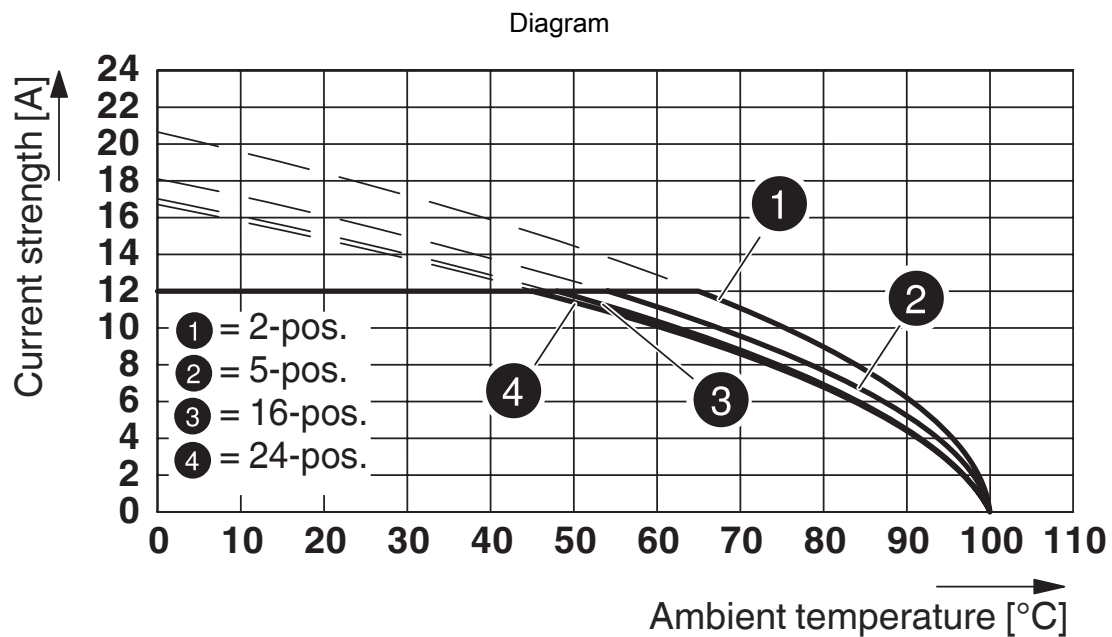
Type: MVSTBR 2,5/...-ST-5,08 with MSTBA 2,5/...-G-5,08



Type: MVSTB(R/W) 2,5/...-ST with MDSTBVA 2,5/...-G-5,08

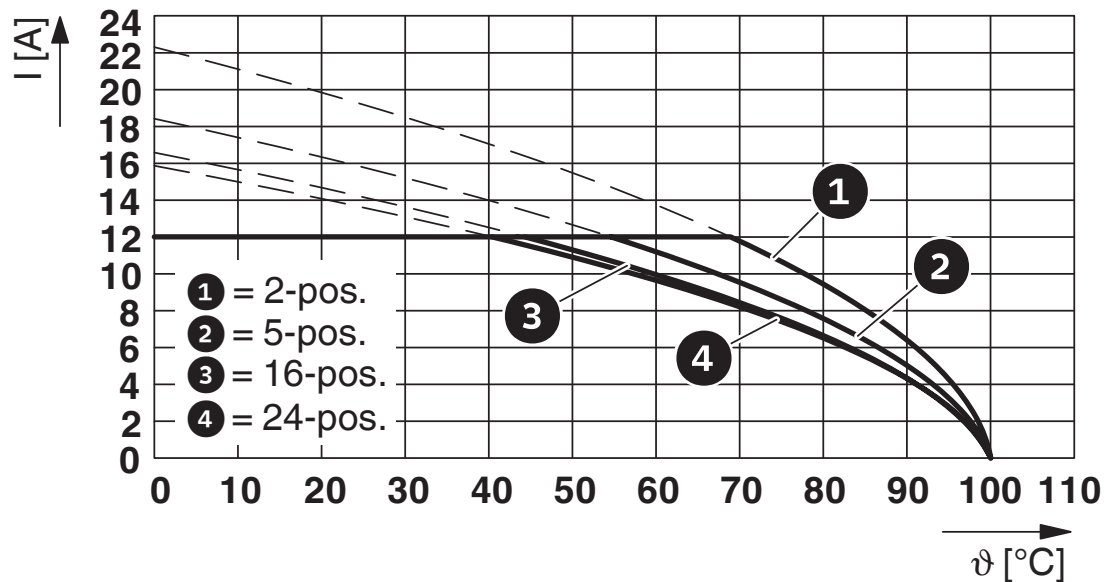


Type: MVSTBR 2,5/...-ST-5,08 with MDSTB 2,5/...-G1-5,08



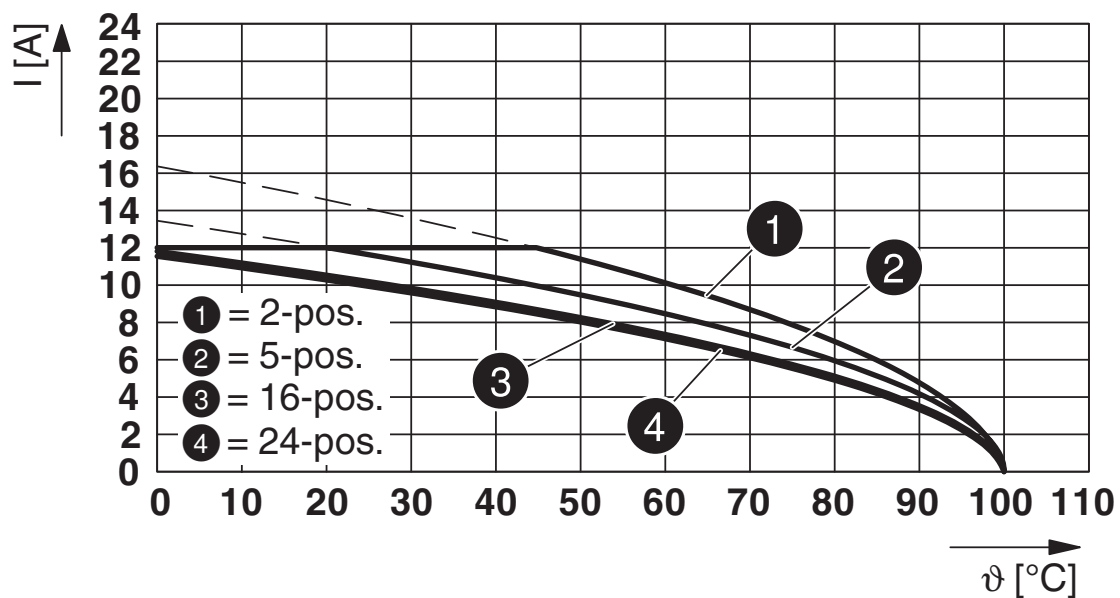
Type: MVSTBR 2,5/...-ST-5,08 with MSTBVK 2,5/...-G-5,08

Diagram

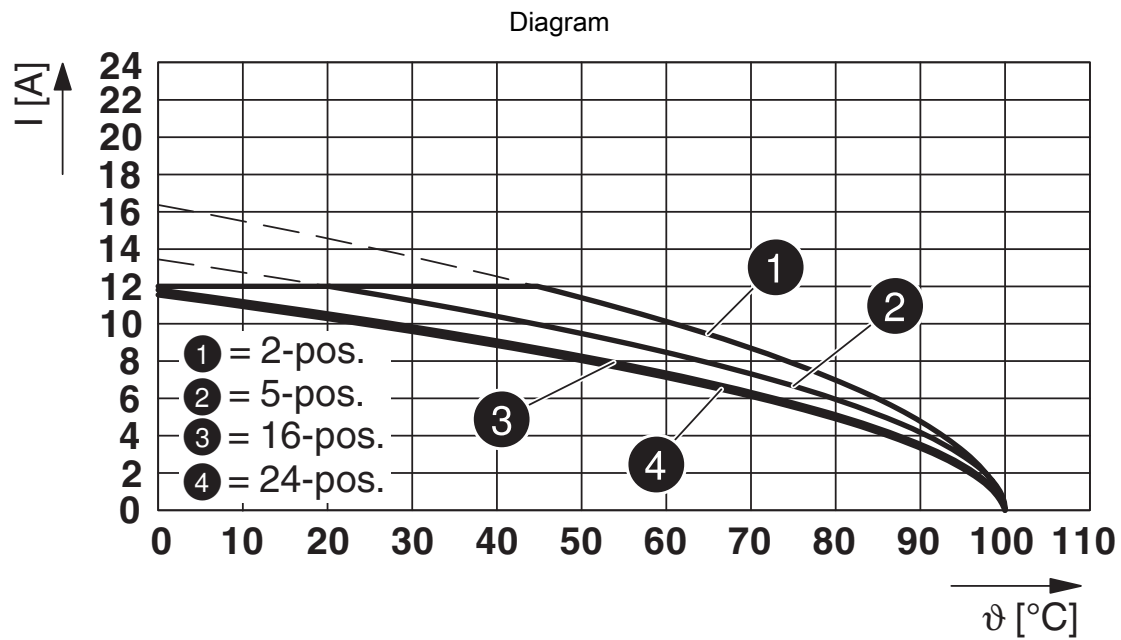


Type: MVSTBR 2,5/...-ST-5,08 with SMSTBA 2,5/...-G-5,08

Diagram



Type: MVSTB(R/W) 2,5/...-ST-5,08 with MSTBVA 2,5/...-G-5,08



Type: MVSTBR 2,5/...-ST-5,08 with MSTBV 2,5/...-G-5,08

# MVSTBR 2,5/13-ST-5,08 - PCB connector





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1792359>

|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 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>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: 40050694 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|  | 250 V                 | 12 A                  | -                 | 0.2 - 2.5                   |

# MVSTBR 2,5/13-ST-5,08 - PCB connector



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27460202 |
| ECLASS-12.0 | 27460202 |
| ECLASS-13.0 | 27460202 |

### ETIM

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

### UNSPSC

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

# MVSTBR 2,5/13-ST-5,08 - PCB connector



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## Environmental product compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |



# MVSTBR 2,5/13-ST-5,08 - PCB connector



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## Accessories

### SZS 0,6X3,5 - Screwdriver

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

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### B-STIFT - Marker pen

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

## MVSTBR 2,5/13-ST-5,08 - PCB connector

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## SK 5,08/3,8:UNBEDRUCKT - Marker card

0805412

<https://www.phoenixcontact.com/us/products/0805412>

Marker card, Din A4, white, unlabeled, can be labeled with: Marker pen: without print, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm, Number of individual labels: 1



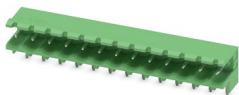
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## MSTBW 2,5/13-G-5,08 - PCB header

1735772

<https://www.phoenixcontact.com/us/products/1735772>

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, contact connection type: Pin, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: MSTBW 2,5/...-G, pitch: 5.08 mm, mounting: Wave soldering, 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



# MVSTBR 2,5/13-ST-5,08 - PCB connector



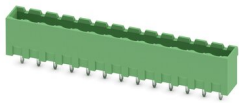
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## MSTBVA 2,5/13-G-5,08 - PCB header

1755846

<https://www.phoenixcontact.com/us/products/1755846>

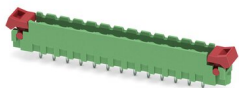


PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: MSTBVA 2,5/...-G, pitch: 5.08 mm, mounting: Wave soldering, 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

## MSTBV 2,5/13-GEH-5,08 - PCB header

1808573

<https://www.phoenixcontact.com/us/products/1808573>



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, contact connection type: Pin, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: MSTBV 2,5/...-GEH, pitch: 5.08 mm, mounting: Wave soldering, 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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