

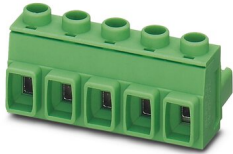
# PCB connector - GMSTB 2,5 HCV/ 4-ST-7,62



1714294

<https://www.phoenixcontact.com/us/products/1714294>

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PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 16 A, rated voltage (III/2): 1000 V, contact surface: Tin, type of contact: Female connector, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: GMSTB 2,5 HCV/..-ST, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5 HC, 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
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- 600 V UL approval in the smallest of dimensions

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1714294             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 50 pc               |
| Sales Key                            | A02                 |
| Product Key                          | AACAIE              |
| Catalog Page                         | Page 502 (C-1-2013) |
| GTIN                                 | 4046356095587       |
| Weight per Piece (including packing) | 8.577 g             |
| Weight per Piece (excluding packing) | 7.932 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   | 4                     |
| Pitch                 | 7.62 mm               |
| Number of connections | 4                     |
| Number of rows        | 1                     |
| Mounting flange       | without               |
| Number of potentials  | 4                     |

### Electrical properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 16 A   |
| Nominal voltage $U_N$       | 1000 V |
| Degree of pollution         | 3      |
| Contact resistance          | 0.6 mΩ |
| Rated voltage (III/3)       | 1000 V |
| Rated surge voltage (III/3) | 8 kV   |
| Rated voltage (III/2)       | 1000 V |
| Rated surge voltage (III/2) | 8 kV   |

### Connection data

#### Connection technology

|                       |                      |
|-----------------------|----------------------|
| Type                  | Standard             |
| Connector system      | COMBICON MSTB 2,5 HC |
| 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                                    | 0 °  |
| 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>    |

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|   |   |
|---|---|
| 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 mm <sup>2</sup>   |
| Cylindrical gauge a x b / diameter  | 2.8 mm x 2.4 mm / 2.5 mm                    |
| Stripping length  | 8 mm  |
| Tightening torque   | 0.5 Nm ... 0.6 Nm                           |

## Material specifications

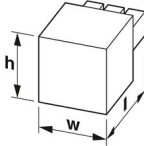
### Material data - contact

|  |  |
|--|--|
| 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 (2 - 4 µm Sn)  |
| Metal surface contact area (top layer)   | Tin (2 - 4 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               | 7.62 mm  |
| Width [w]           | 30.26 mm   |
| Height [h]          | 17.5 mm  |
| Length [l]          | 21 mm  |
| Installed height    | 17.5 mm  |

## Mounting

|                       |                |
|-----------------------|----------------|
| Mounting type         | Wave soldering |
| 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                       | 50          |
| Insertion strength per pos. approx. | 7 N         |
| Withdraw strength per pos. approx.  | 5 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           |

## 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       | 9.8 kV                |
| Contact resistance R <sub>1</sub>            | 0.6 mΩ                |
| Contact resistance R <sub>2</sub>            | 0.8 mΩ                |
| Insertion/withdrawal cycles                  | 50                    |
| 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 | 4.26 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)       | 1000 V              |
| Rated surge voltage (III/3)            | 8 kV                |

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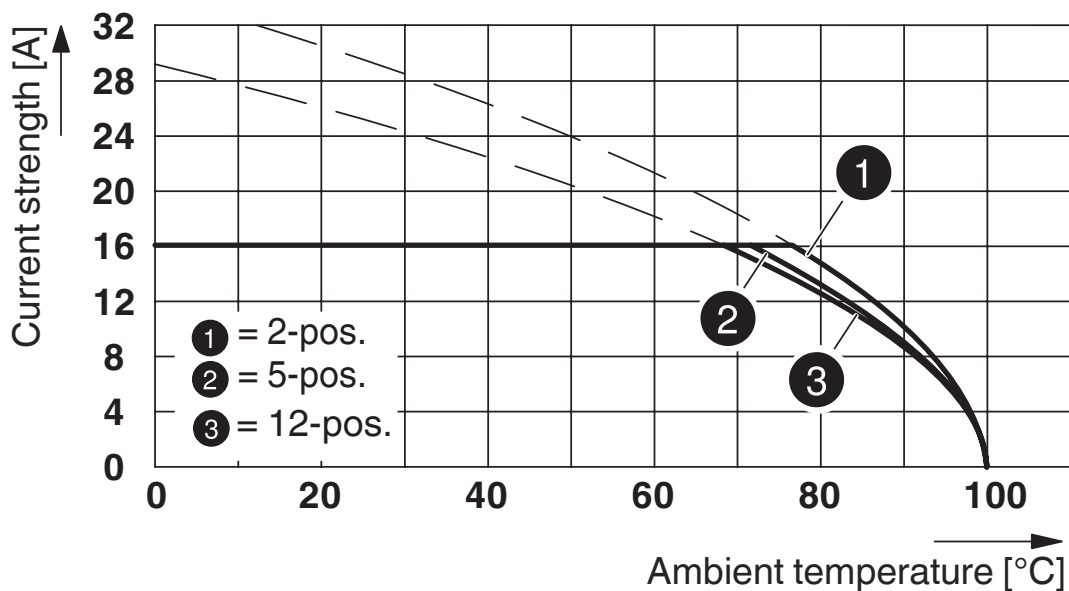
|  |         |
|--|---------|
| minimum clearance value - non-homogenous field (III/3) | 8 mm    |
| minimum creepage distance (III/3)                      | 12.5 mm |
| Rated insulation voltage (III/2)                       | 1000 V  |
| Rated surge voltage (III/2)                            | 8 kV    |
| minimum clearance value - non-homogenous field (III/2) | 8 mm    |
| minimum creepage distance (III/2)                      | 8 mm    |
| Rated insulation voltage (II/2)                        | 1000 V  |
| Rated surge voltage (II/2)                             | 6 kV    |
| minimum clearance value - non-homogenous field (II/2)  | 5.5 mm  |
| minimum creepage distance (II/2)                       | 5.5 mm  |

## Packaging specifications

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

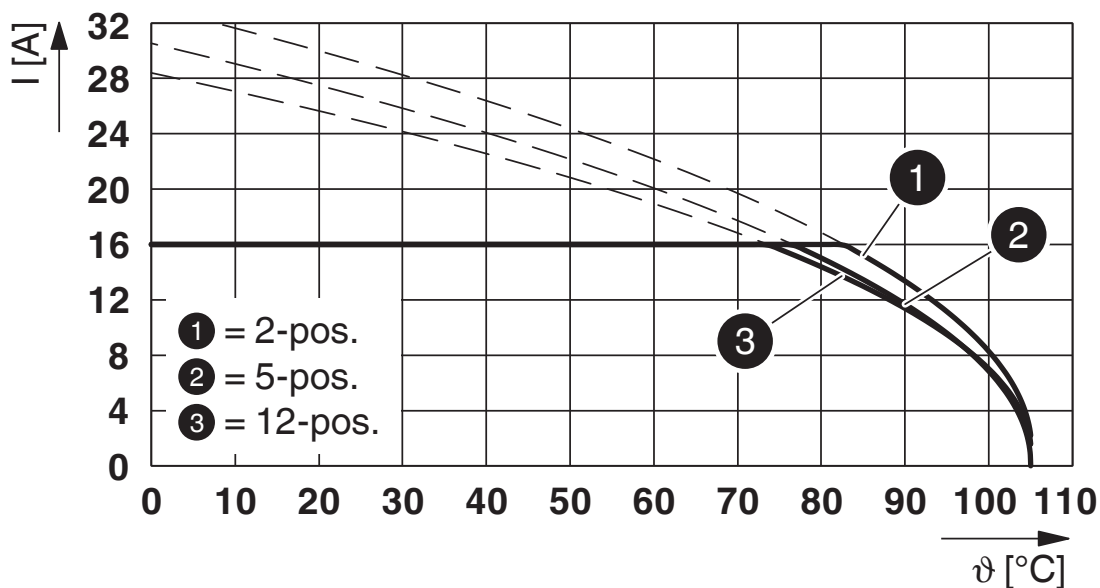
Drawings

Diagram

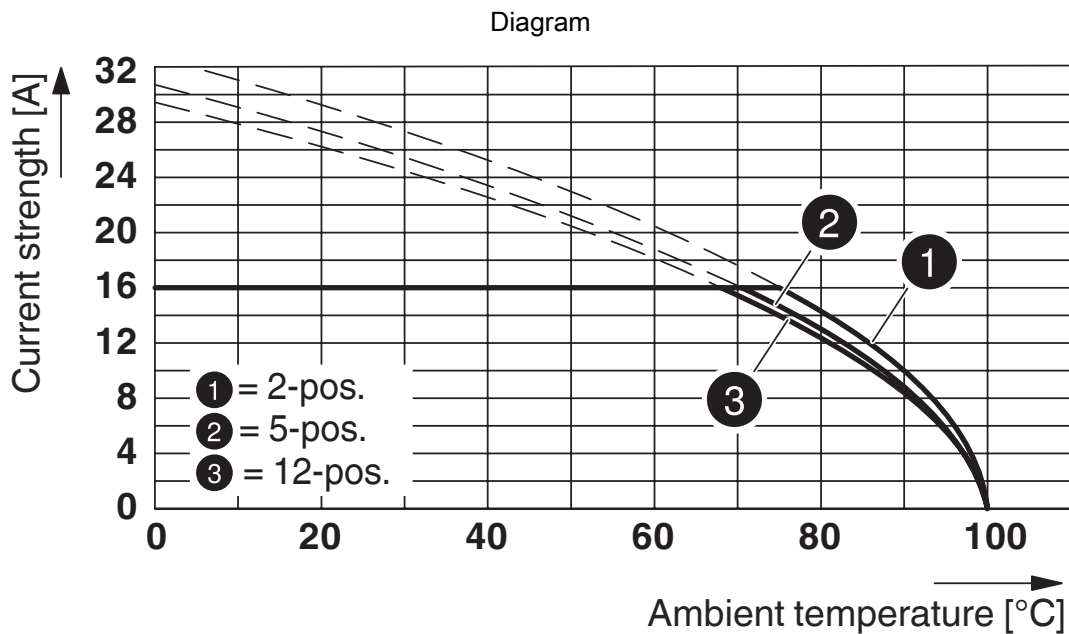


Type: GMSTB 2,5 HCV/...-ST-7,62 with GMSTBVA 2,5 HC/...-G-7,62

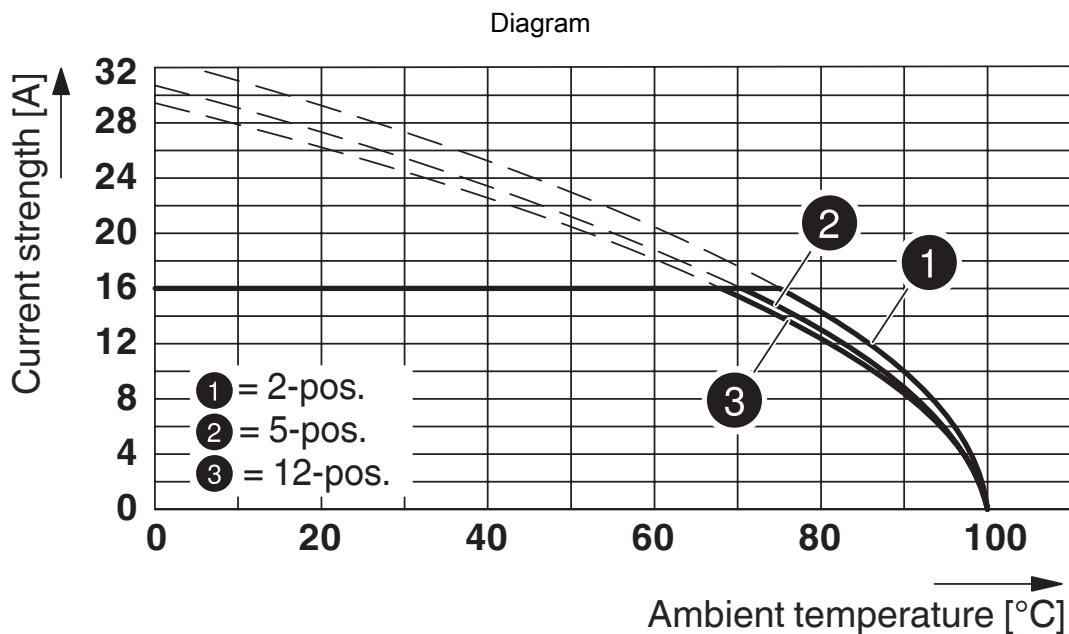
Diagram



Type: GMSTB 2,5 HCV/...-ST-7,62 with GIC 2,5 HCV/...-ST-7,62



Type: GMSTB 2,5 HCV/...-ST-7,62 with GMSTBA 2,5 HC/...-G-7,62



Type: GMSTB 2,5 HCV/...-ST-7,62 with GMSTBA 2,5 HC/...-GU-7,62



# PCB connector - GMSTB 2,5 HCV/ 4-ST-7,62



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## Approvals



**EAC**

Approval ID: B.01687



**cULus Recognized**

Approval ID: E60425-19931013

|             | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B |                       |                       |                   |                             |
|             | 600 V                 | 20 A                  | 30 - 12           | -                           |
| Use group C |                       |                       |                   |                             |
|             | 600 V                 | 20 A                  | 30 - 12           | -                           |

# PCB connector - GMSTB 2,5 HCV/ 4-ST-7,62



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## 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 - GMSTB 2,5 HCV/ 4-ST-7,62



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<https://www.phoenixcontact.com/us/products/1714294>

## Environmental Product Compliance

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

# PCB connector - GMSTB 2,5 HCV/ 4-ST-7,62



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## Accessories

### 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

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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 - GMSTB 2,5 HCV/ 4-ST-7,62

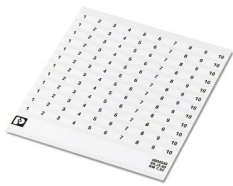
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<https://www.phoenixcontact.com/us/products/1714294>

## Marker card

Marker card - SK 7,62/3,8:FORTL.ZAHLEN - 0804549

<https://www.phoenixcontact.com/us/products/0804549>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: 7.62 x 3.8 mm

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## Marker card

Marker card - SK 3,8 REEL P7,62 WH CUS - 0825128

<https://www.phoenixcontact.com/us/products/0825128>



Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: continuous x 3.8 mm

# PCB connector - GMSTB 2,5 HCV/ 4-ST-7,62



1714294

<https://www.phoenixcontact.com/us/products/1714294>

## Marker card

Marker card - SK U/3,8 WH:UNBEDRUCKT - 0803906

<https://www.phoenixcontact.com/us/products/0803906>



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

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## 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

# PCB connector - GMSTB 2,5 HCV/ 4-ST-7,62



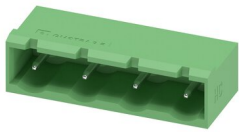
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<https://www.phoenixcontact.com/us/products/1714294>

## PCB header

PCB header - GMSTBA 2,5 HC/ 4-G-7,62 - 1728879

<https://www.phoenixcontact.com/us/products/1728879>

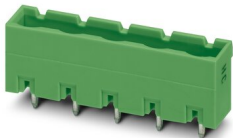


PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 16 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Male connector, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: GMSTBA 2,5 HC/..-G, pitch: 7.62 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5 HC, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

## PCB header

PCB header - GMSTBVA 2,5 HC/ 4-G-7,62 - 1758179

<https://www.phoenixcontact.com/us/products/1758179>



PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 16 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Male connector, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: GMSTBVA 2,5 HC/..-G, pitch: 7.62 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 HC, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

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