

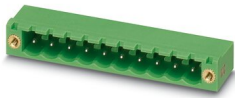
MSTB 2,5 HC/ 4-GF-5,08 - PCB header



1924101

<https://www.phoenixcontact.com/in/products/1924101>

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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 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: MSTB 2,5 HC/..-GF, 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 HC, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use
- Screwable flange for superior mechanical stability
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1924101 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales Key | AAC |
| Product Key | AACSHA |
| Catalog Page | Page 497 (C-1-2013) |
| GTIN | 4017918600075 |
| Weight per Piece (including packing) | 2.85 g |
| Weight per Piece (excluding packing) | 2.496 g |
| Customs tariff number | 85366930 |
| Country of origin | DE |

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Technical Data

Product properties

| | |
|---------------------------|-----------------------|
| Type | Standard |
| Product line | COMBICON Connectors M |
| Product type | PCB headers |
| Product family | MSTB 2,5 HC/...-GF |
| Number of positions | 4 |
| Pitch | 5.08 mm |
| Number of connections | 4 |
| Number of rows | 1 |
| Mounting flange | Threaded flange |
| Number of potentials | 4 |
| Pin layout | Linear pinning |
| Solder pins per potential | 1 |

Electrical properties

| | |
|-----------------------------|---------------------------|
| Nominal current I_N | 16 A (see derating curve) |
| Nominal voltage U_N | 320 V |
| Degree of pollution | 3 |
| Contact resistance | 1 m Ω |
| Rated voltage (III/3) | 320 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 |

Mounting

| | |
|---------------|----------------|
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |

Flange

| | |
|-------------------|--------|
| Tightening torque | 0.3 Nm |
|-------------------|--------|

Attachment on the PCB

| | |
|-------------------|--|
| Tightening torque | 0.3 Nm |
| Screw | Sheet metal screw ISO 1481-ST 2,2x6,5 C or ISO 7049-ST 2,2x6,5 C |

Material specifications

Material data - contact

| | |
|------|--|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
|------|--|

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| | |
|---|------------------------|
| Contact material | Cu alloy |
| Surface characteristics | Tin-plated |
| Metal surface contact area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface contact area (middle layer) | Nickel (1.3 - 3 µm Ni) |
| Metal surface soldering area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1.3 - 3 µm Ni) |

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 |

Material data – actuating element

| | |
|-----------|-----|
| Color () | () |
|-----------|-----|

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 |

Repeated connection and disconnection

| | |
|---------------|---------------------|
| 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 ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 2.5 mm ² / solid / > 50 N |
| | 2.5 mm ² / flexible / > 50 N |

Insertion and withdrawal forces

| | |
|-------------------------------------|-------------|
| Result | Test passed |
| No. of cycles | 50 |
| Insertion strength per pos. approx. | 6 N |

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| | |
|---|------------------------|
| Withdraw strength per pos. approx. | 5 N |
| 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 |

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 |

Temperature cycles

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

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

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| | |
|---|--------|
| 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 |

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 | 1 m Ω |
| Contact resistance R_2 | 1 m Ω |
| Insertion/withdrawal cycles | 50 |

Climatic test

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

Shocks

| | |
|-----------------|-----------------------------------|
| Specification | IEC 60068-2-27:2008-02 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 30g |
| Shock duration | 18 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

Ambient conditions

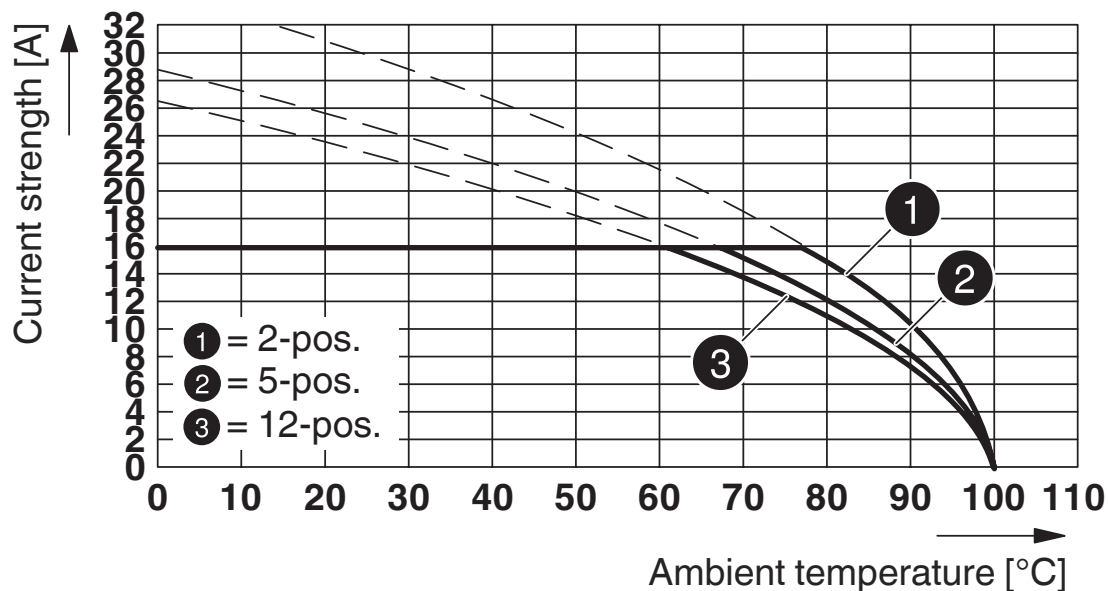
| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

Packaging specifications

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

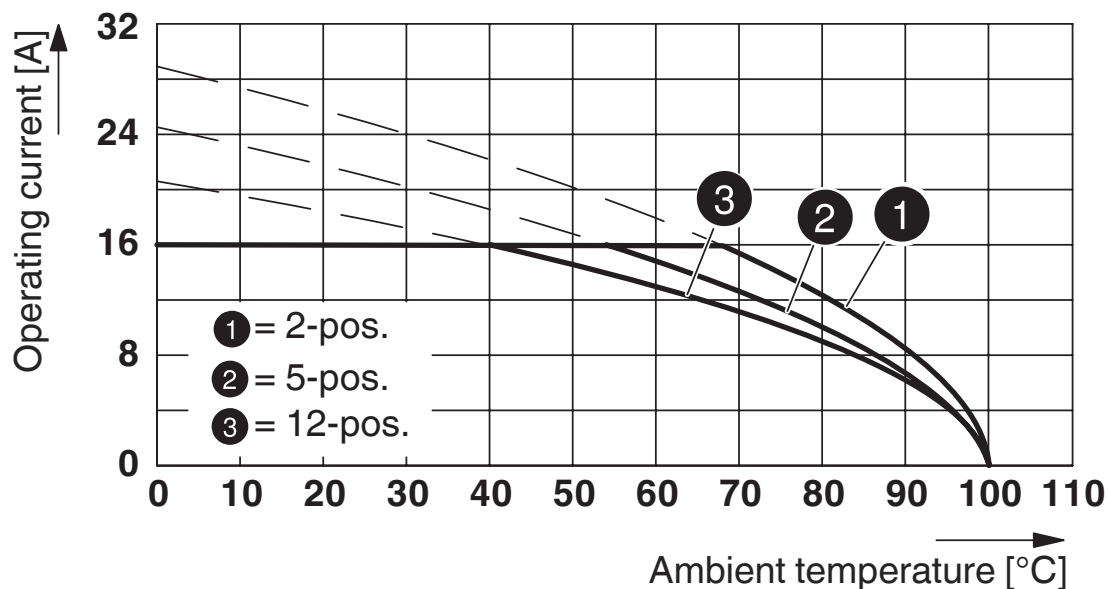
Drawings

Diagram



Type: MSTB 2,5 HC/...-STF-5,08 with MSTB 2,5 HC/...-GF-5,08

Diagram



Type: FKC 2,5 HC/...-STF-5,08 with MSTB 2,5/...-GF-5,08

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Approvals



IECEE CB Scheme

Approval ID: DE1-60988-B1B2



EAC

Approval ID: B.01687



cULus Recognized

Approval ID: E60425-19931011



VDE Zeichengenehmigung

Approval ID: 40050079

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-10.0.1 | 27440402 |
| ECLASS-11.0 | 27460201 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

UNSPSC

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

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Environmental Product Compliance

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

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Accessories

MSTB-BL - Accessories

1755477

<https://www.phoenixcontact.com/in/products/1755477>



Keying cap, for forming sections, plugs onto header pin, green insulating material

SK 5,08/3,8:FORTL.ZAHLEN - Marker card

0804293

<https://www.phoenixcontact.com/in/products/0804293>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

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CR-MSTB - Coding section

1734401

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

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



MSTB 2,5 HC/ 4-STF-5,08 - PCB connector

1912207

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 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: MSTB 2,5 HC/.-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard



MSTB 2,5 HC/ 4-GF-5,08 - PCB header

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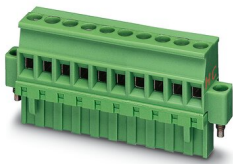
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MVSTBR 2,5 HC/ 4-STF-5,08 - PCB connector

1912647

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 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: MVSTBR 2,5 HC/...-STF, 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 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

MVSTBW 2,5 HC/ 4-STF-5,08 - PCB connector

1913086

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 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: MVSTBW 2,5 HC/...-STF, 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 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

MSTB 2,5 HC/ 4-GF-5,08 - PCB header

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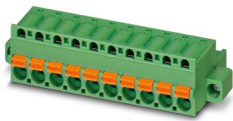
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FKC 2,5 HC/ 4-STF-5,08 - PCB connector

1942507

<https://www.phoenixcontact.com/in/products/1942507>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A, rated voltage (III/2): 320 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: FKC 2,5 HC/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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