# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (http://phoenixcontact.com/download)



The figure shows a 10-position version of the product

PCB connector, nominal current: 16 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 2, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

## 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

## Key Commercial Data

| | |
|---|---|
| Packing unit | 50 pc |
| GTIN | 4 017918 192334 |
| GTIN | 4017918192334 |

## Technical data

### Item properties

| | |
|---|---|
| Brief article description | Printed-circuit board connector |
| Plug-in system | POWER COMBICON 2,5 |
| Type of contact | Female connector |
| Range of articles | MVSTBR 2,5 HC/..-ST |
| Pitch | 5.08 mm |
| Number of positions | 2 |
| Connection method | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L) |
| Screw thread | M3 |
| Locking | without |
| Number of levels | 1 |

# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Technical data

### Item properties

| | |
|---|---|
| Number of connections | 2 |
| Number of potentials | 2 |

### Electrical parameters

| | |
|---|---|
| Nominal current | 16 A |
| Nom. voltage | 320 V |
| Rated voltage | 320 V |
| Rated voltage (III/2) | 320 V |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated surge voltage (III/2) | 4 kV |
| Rated surge voltage (II/2) | 4 kV |

### Connection capacity

| | |
|---|---|
| Connection method | Screw connection with tension sleeve |
| pluggable | Yes |
| Conductor cross section solid | 0.2 mm² ... 2.5 mm² |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross section AWG / kcmil | 24 ... 12 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 2.5 mm² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 2.5 mm² |
| 2 conductors with same cross section, solid | 0.2 mm² ... 1 mm² |
| 2 conductors with same cross section, flexible | 0.2 mm² ... 1.5 mm² |
| 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 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 (5 - 7 µm Sn) |
| Metal surface contact area (top layer) | Tin (5 - 7 µm Sn) |

### Material data - housing

| | |
|---|---|
| Housing color | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |

# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Technical data

### Material data - housing

| | |
|---|---|
| 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 for the product

| | |
|---|---|
| Length [ l ] | 12.6 mm |
| Width [ w ] | 10.16 mm |
| Height [ h ] | 26 mm |
| Pitch | 5.08 mm |
| Height (without solder pin) | 26 mm |

### Packaging information

| | |
|---|---|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |
| Denomination packing units | Pcs. |

### General product information

| | |
|---|---|
| Note | 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. |
| | 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. |

### Ambient conditions

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

### Termination and connection method

| | |
|---|---|
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

### Pull-out test

| | |
|---|---|
| Pull-out test | IEC 60999-1:1999-11 |
| | Test passed |
| Conductor cross section / conductor type / tensile force | 0.2 mm² / solid / > 10 N |
| | 0.2 mm² / flexible / > 10 N |
| | 2.5 mm² / solid / > 50 N |
| | 2.5 mm² / flexible / > 50 N |

### Mechanical tests according to standard

| | |
|---|---|
| Test specification | IEC 61984 |
| Visual examination | Test passed IEC 60512-1-1:2002-02 |
| Dimensional test | Test passed IEC 60512-1-2:2002-02 |

# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Technical data

### Mechanical tests according to standard

| | |
|---|---|
| Resistance of marking | Test passed IEC 60068-2-70:1995-12 |
| Result | Test passed |
| Specification | IEC 60512-13-2:2006-02 |
| No. of cycles | 50 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 9 N |
| Polarization and coding | Test passed IEC 60512-13-5:2006-02 |
| Result | Test passed |
| Specification | IEC 60512-15-1:2008-05 |
| Test force per pos. | 21 N |

### Air clearances and creepage distances

| | |
|---|---|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 3 mm |
| Minimum clearance - inhomogeneous field (III/2) | 3 mm |
| Minimum clearance - inhomogeneous field (II/2) | 3 mm |
| Minimum creepage distance value (III/3) | 4 mm |
| Minimum creepage distance value (III/2) | 1.6 mm |
| Minimum creepage distance value (II/2) | 3.2 mm |

### Current carrying capacity / derating curves

| | |
|---|---|
| Specification | IEC 61984 |

### Mechanical tests (A)

| | |
|---|---|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 9 N |
| Polarization when inserted requirement >20 N | Test passed |
| Contact holder in insert requirements >20 N | Test passed |

### Durability tests (B)

| | |
|---|---|
| Specification | IEC 60512-9-1:2010-03 |
| Contact resistance $R_1$ | 1 mΩ |
| Insertion/withdrawal cycles | 50 |
| Contact resistance $R_2$ | 1.1 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |
| Insulation resistance, neighboring positions | >1 TΩ |

### Thermal tests (C)

| | |
|---|---|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 12 |

# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Technical data

### Thermal tests (C)

| | |
|---|---|
| Conductor cross section | 2.5 mm² |
| Test current | 16 A |
| Upper limiting temperature requirements <100 °C | Test passed |

### Climatic tests (D)

| | |
|---|---|
| Specification | ISO 6988:1985-02 |
| Cold stress | -40 °C/2 h |
| Thermal stress | 100 °C/168 h |
| Corrosive stress | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/40 °C/1 cycle |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |

### Environmental and durability tests (E)

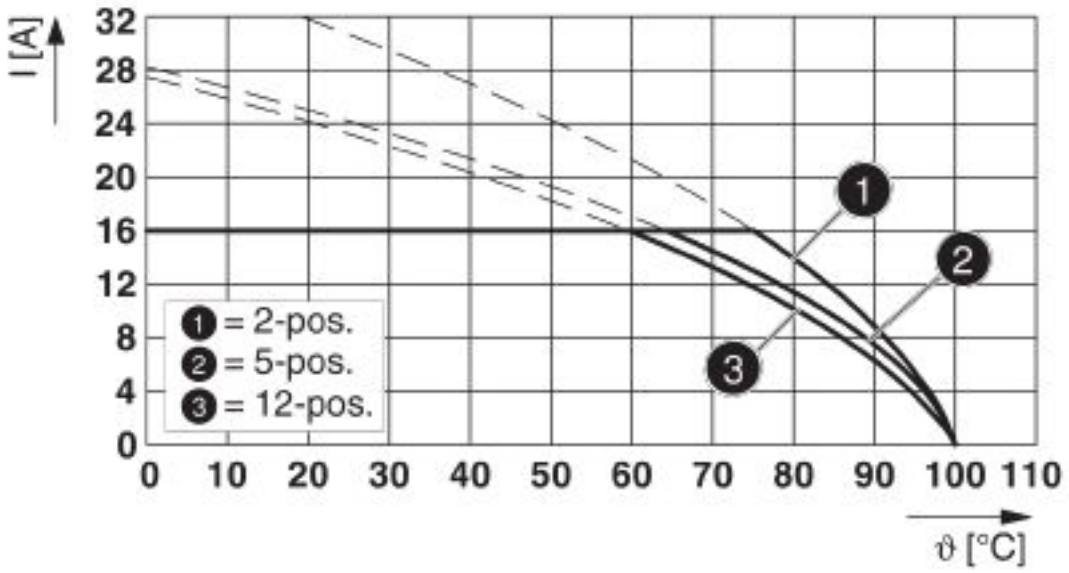
| | |
|---|---|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

### Environmental Product Compliance

| | |
|---|---|
| REACh SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration” |

## Drawings

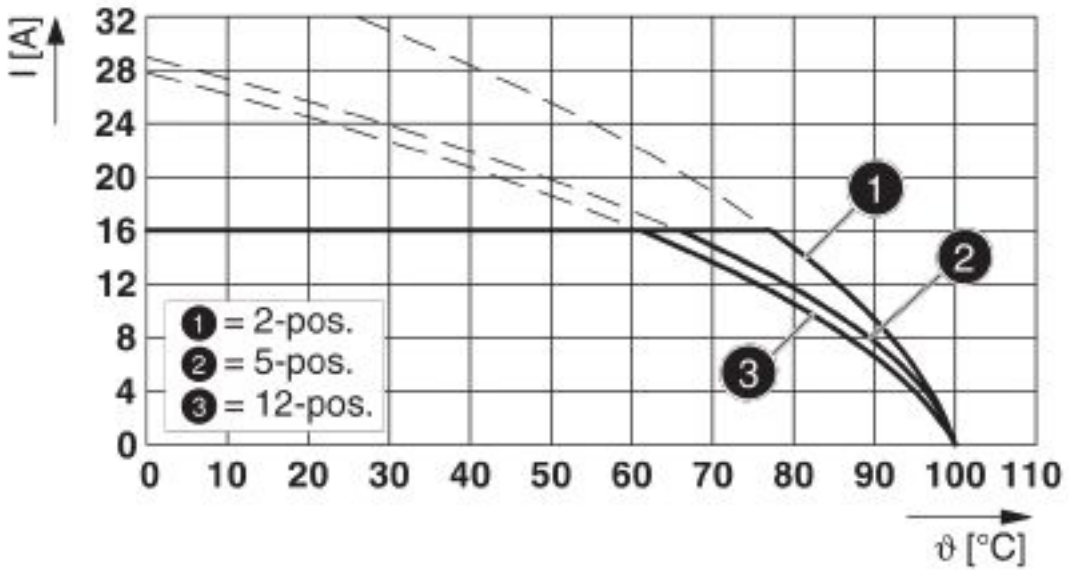
Diagram




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

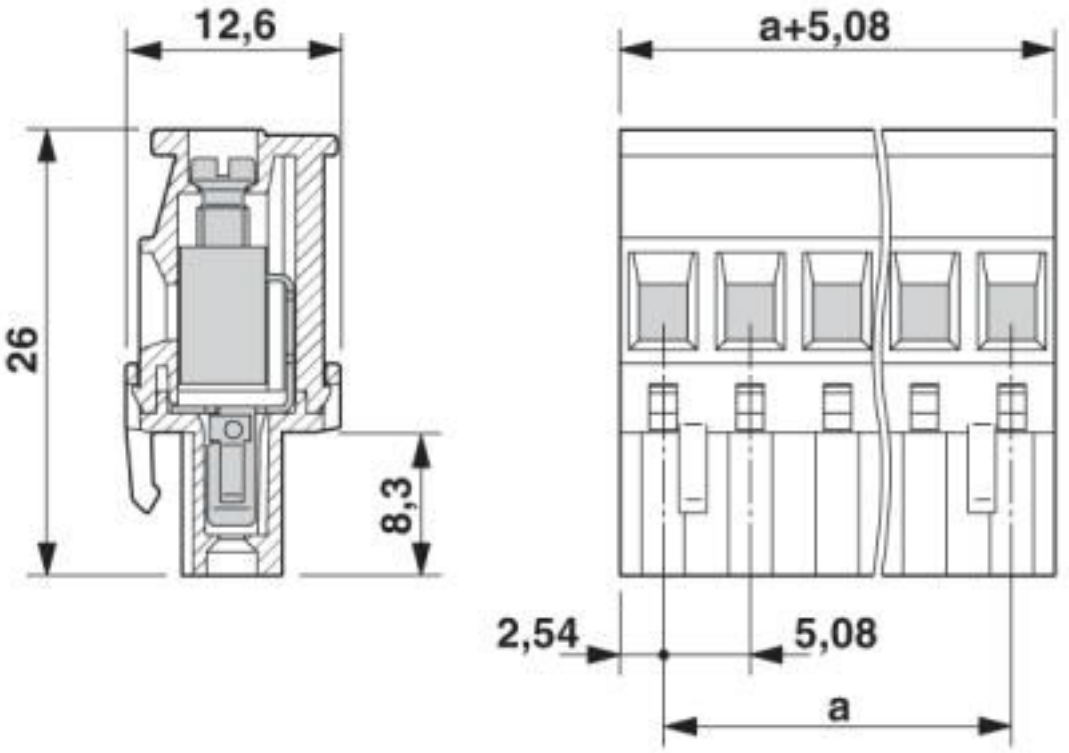
# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

Diagram




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

Dimensional drawing



# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440309 |
| eCl@ss 8.0 | 27440309 |
| eCl@ss 9.0 | 27440309 |

### ETIM

| | |
|---|---|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002638 |
| ETIM 5.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

### UNSPSC

| | |
|---|---|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |
| UNSPSC 12.01 | 39121409 |
| UNSPSC 13.2 | 39121409 |
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

## Approvals

### Approvals

Approvals

IECEE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

### Approval details

# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Approvals

| | | | |
|---|---|---|---|
| IECEE CB Scheme | CB scheme | http://www.iecee.org/ | DE1-60988-B1B2 |

| | |
|---|---|
| Nominal voltage UN | 250 V |
| Nominal current IN | 16 A |
| mm²/AWG/kcmil | 0.2-2.5 |

| | | |
|---|---|---|
| EAC | EAC | B.01687 |

| | | | |
|---|---|---|---|
| cULus Recognized | c UL us | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19931011 |

| | B | D |
|---|---|---|
| Nominal voltage UN | 300 V | 300 V |
| Nominal current IN | 16 A | 10 A |
| mm²/AWG/kcmil | 30-12 | 30-12 |

| | | | |
|---|---|---|---|
| VDE Zeichengenehmigung | VDE | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40050079 |

| | |
|---|---|
| Nominal voltage UN | 250 V |
| Nominal current IN | 16 A |
| mm²/AWG/kcmil | 0.2-2.5 |

## Accessories

### Accessories

### Coding element

Coding profile - CP-MSTB - 1734634



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

### Labeled terminal marker

# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Accessories

Marker card - SK 3,8 REEL P5,08 WH CUS - 0825125



Marker card, Card, can be ordered: By card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: continuous x 3.8 mm

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293



Marker card, 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

### Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 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

### Terminal marking

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

Marker strip - SK 3,8 WH:REEL - 0805218



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 90000 mm, lettering field size: continuous x 3.8 mm, Number of individual labels: 210000

### Additional products

# Printed-circuit board connector - MVSTBR 2,5 HC/ 2-ST-5,08 - 1912401

## Accessories

Feed-through header - MSTBA 2,5 HC/ 2-G-5,08 - 1923869



PCB headers, nominal current: 16 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 2, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

Feed-through header - MSTBVA 2,5 HC/ 2-G-5,08 - 1924305



PCB headers, nominal current: 16 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 2, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm

Phoenix Contact 2020 © - all rights reserved
http://www.phoenixcontact.com

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
http://www.phoenixcontact.com