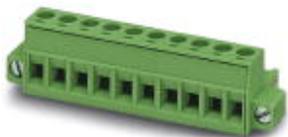


Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

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>)

PCB connector, nominal current: 16 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



The figure shows a 10-position version of the product

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
- ✓ Screwable flange for superior mechanical stability



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 50 pc |
| GTIN | |
| GTIN | 4017918191245 |

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 | MSTB 2,5 HC/...STF |
| Pitch | 5 mm |
| Number of positions | 4 |
| Connection method | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L) |
| Screw thread | M3 |
| Locking | Screw flange |

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Technical data

Item properties

| | |
|-----------------------|---|
| Number of levels | 1 |
| Number of connections | 4 |
| Number of potentials | 4 |

Electrical parameters

| | |
|-----------------------------|-------|
| Nominal current | 16 A |
| Nom. voltage | 320 V |
| Rated voltage | 250 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 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG / kcmil | 24 ... 12 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| 2 conductors with same cross section, solid | 0.2 mm ² ... 1 mm ² |
| 2 conductors with same cross section, flexible | 0.2 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 1 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1.5 mm ² |
| Stripping length | 7 mm |
| Torque | 0.5 Nm ... 0.6 Nm |

Flange specifications

| | |
|-----------------|---------------|
| Type of locking | Screw locking |
| Mounting flange | Screw flange |
| Torque | 0.3 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 (4 - 8 µm Sn) |
| Metal surface contact area (top layer) | Tin (4 - 8 µm Sn) |

Material data - housing

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Technical data

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 for the product

| | |
|-----------------------------|---------|
| Length [l] | 18.2 mm |
| Width [w] | 29.4 mm |
| Height [h] | 15 mm |
| Pitch | 5 mm |
| Height (without solder pin) | 15 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. |
|------|--|

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 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 |

Mechanical tests according to standard

| | |
|--------------------|-----------|
| Test specification | IEC 61984 |
|--------------------|-----------|

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Technical data

Mechanical tests according to standard

| | |
|-------------------------------------|------------------------------------|
| Visual examination | Test passed IEC 60512-1-1:2002-02 |
| Dimensional test | Test passed IEC 60512-1-2:2002-02 |
| 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. | 4 N |
| Withdraw strength per pos. approx. | 3 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. | 41.5 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) | 3.2 mm |
| Minimum creepage distance value (III/2) | 3 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. | 4 N |
| Withdraw strength per pos. approx. | 3 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 | 0.6 mΩ |
| Insertion/withdrawal cycles | 50 |
| Contact resistance R ₂ | 0.7 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |
| Insulation resistance, neighboring positions | > 5 TΩ |

Climatic tests (D)

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Technical data

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)

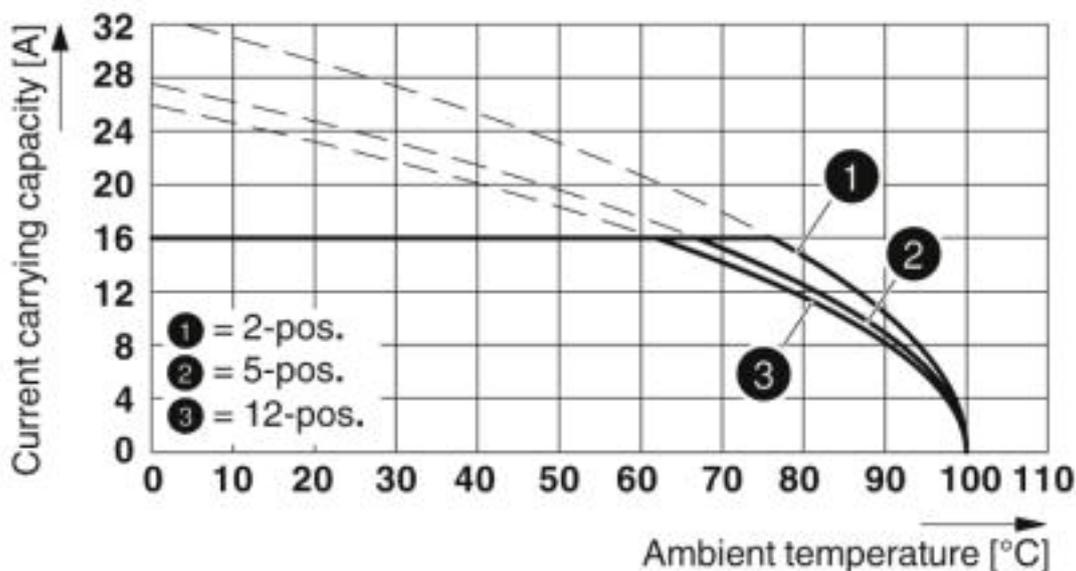
| | |
|---------------------------------------|-------------------------------------|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

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

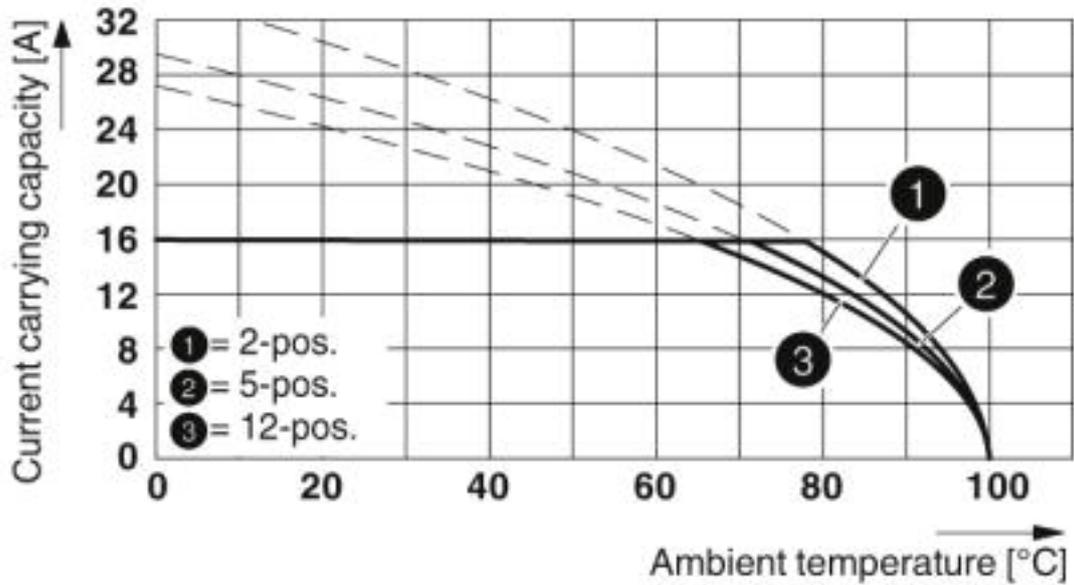
Diagram



Derating curve for: MSTB 2,5 HC/...ST with MSTBA 2,5 HC/...G

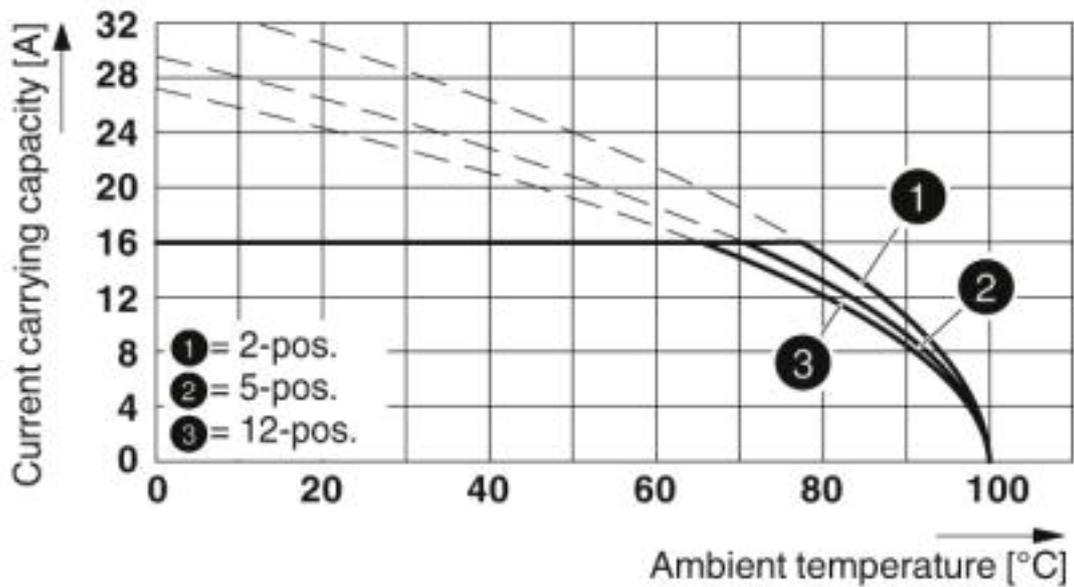
Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Diagram



Derating curve for: MSTB 2,5 HC/...-ST with MSTBVA 2,5 HC/...-G

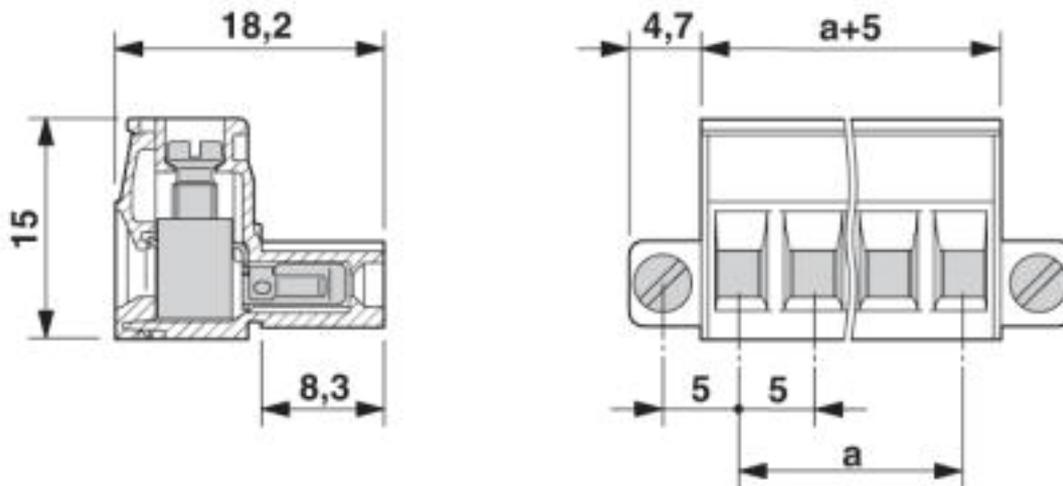
Diagram



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

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Dimensional drawing



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 |

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121409 |
|-------------|----------|

Approvals

Approvals

Approvals

IECEE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

| | | | |
|----------------------------|---------|---|----------------|
| IECEE CB Scheme | | http://www.iecee.org/ | DE1-60988-B1B2 |
| Nominal voltage UN | 250 V | | |
| Nominal current IN | 16 A | | |
| mm ² /AWG/kcmil | 0.2-2.5 | | |

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

| | | | |
|----------------------------|-------|---|-----------------|
| cULus Recognized | | 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 | |
| mm ² /AWG/kcmil | 30-12 | 30-12 | |

| | | | |
|----------------------------|---------|---|----------|
| VDE Zeichengenehmigung | | 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 | | |
| mm ² /AWG/kcmil | 0.2-2.5 | | |

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Accessories

Accessories

Bridge

Insertion bridge - EBP 2- 5 - 1733169



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

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

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



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 mm, lettering field size: 5 x 3.8 mm

Marker card - SK 3,8 REEL P5 WH CUS - 0825124



Marker card, Card, can be ordered: By card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous 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

Printed-circuit board connector - MSTB 2,5 HC/ 4-STF - 1912090

Accessories

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 - MSTB 2,5 HC/ 4-GF - 1923995

PCB headers, nominal current: 16 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



Feed-through header - MSTBV 2,5 HC/ 4-GF - 1924431

PCB headers, nominal current: 16 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 4, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm

