

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

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 documentation. Our General Terms of Use for Downloads are valid.



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: FRONT-MSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Front screw connection, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Your advantages

- Well-known connection principle allows worldwide use
- Optimized for tight installation situations: operation and conductor connection from one direction
- Screwable flange for superior mechanical stability
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1777895 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales Key | AAC |
| Product Key | AACABB |
| Catalog Page | Page 269 (C-1-2013) |
| GTIN | 4017918039769 |
| Weight per Piece (including packing) | 40.174 g |
| Weight per Piece (excluding packing) | 39.973 g |
| Customs tariff number | 85366990 |
| Country of origin | DE |

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

Technical Data

Product properties

| | |
|-----------------------|-----------------------|
| Type | Standard |
| Product line | COMBICON Connectors M |
| Product type | PCB plug |
| Product family | FRONT-MSTB 2,5/..-STF |
| Number of positions | 12 |
| Pitch | 5.08 mm |
| Number of connections | 12 |
| Number of rows | 1 |
| Mounting flange | Screw flange |
| Number of potentials | 12 |

Electrical properties

| | |
|-----------------------------|----------------|
| Nominal current I_N | 12 A |
| Nominal voltage U_N | 320 V |
| Degree of pollution | 3 |
| Contact resistance | 1.5 m Ω |
| 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

| | |
|-----------------------|---------------------|
| Type | Standard |
| Connector system | COMBICON MSTB 2,5 |
| Nominal cross section | 2.5 mm ² |
| Type of contact | Socket |

Interlock

| | |
|-------------------|---------------|
| Locking type | Screw locking |
| Mounting flange | Screw flange |
| Tightening torque | 0.3 Nm |

Conductor connection

| | |
|------------------------------------|--|
| Connection method | Front screw connection |
| Conductor/PCB connection direction | 0 ° |
| Conductor cross section rigid | 0.34 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 24 ... 12 |

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

| | |
|---|--|
| 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 ... 1.5 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 mm ² |
| Cylindrical gauge a x b / diameter | 2.8 mm x 2.0 mm / 2.4 mm |
| Stripping length | 10 mm |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Specifications for ferrules without insulating collar

| | |
|--|--|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
| ferrules without insulating collar, according to DIN 46228-1 | Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 2.5 mm ² ; Length: 10 mm |

Specifications for ferrules with insulating collar

| | |
|---|--|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
| ferrules with insulating collar, according to DIN 46228-4 | Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 2.5 mm ² ; Length: 10 mm |

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 |

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector

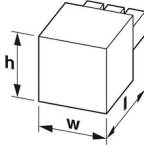


1777895

<https://www.phoenixcontact.com/in/products/1777895>

| | |
|---|--------|
| 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] | 70.76 mm |
| Height [h] | 15 mm |
| Length [l] | 27.2 mm |

Mounting

| | |
|-----------------------|------------------------|
| Drive form screw head | Slotted (L) |
| Connection method | Front screw connection |
| Drive form screw head | Slotted (L) |

Flange

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

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 | 0.34 mm ² / solid / > 15 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 | 25 |
| Insertion strength per pos. approx. | 12 N |
| Withdraw strength per pos. approx. | 9 N |

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

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 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 | 1.5 mΩ |
| Contact resistance R ₂ | 1.6 mΩ |
| Contact resistance R ₂ 2nd level | 1.9 mΩ |
| Insertion/withdrawal cycles | 25 |
| Insulation resistance, neighboring positions | > 5 MΩ |

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 |

1777895

<https://www.phoenixcontact.com/in/products/1777895>

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 | 17 |

Insulation resistance

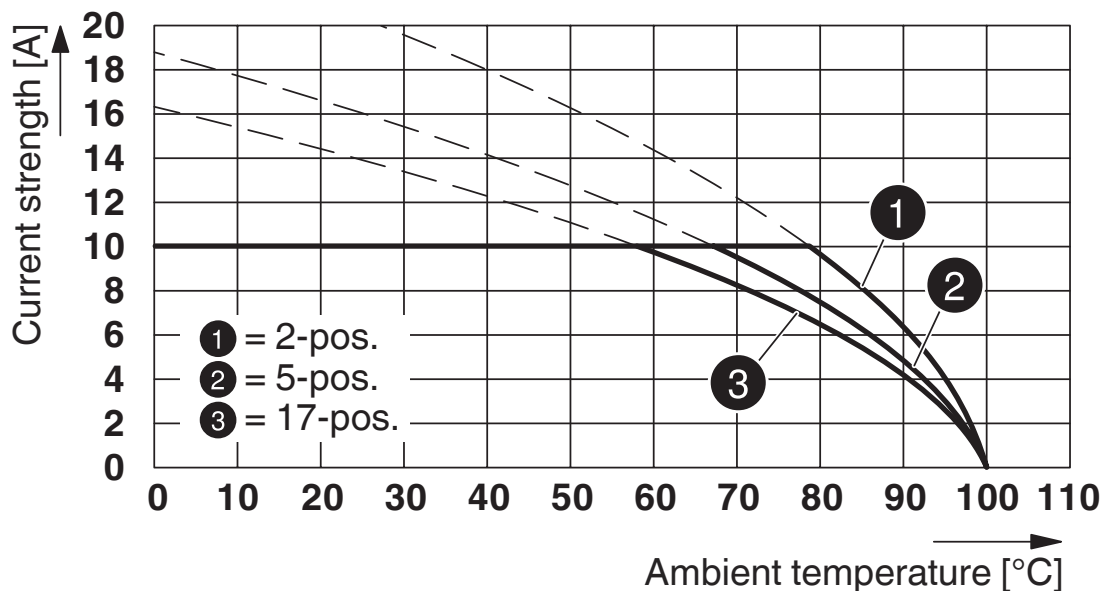
| | |
|--|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ |

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 |
| 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 |

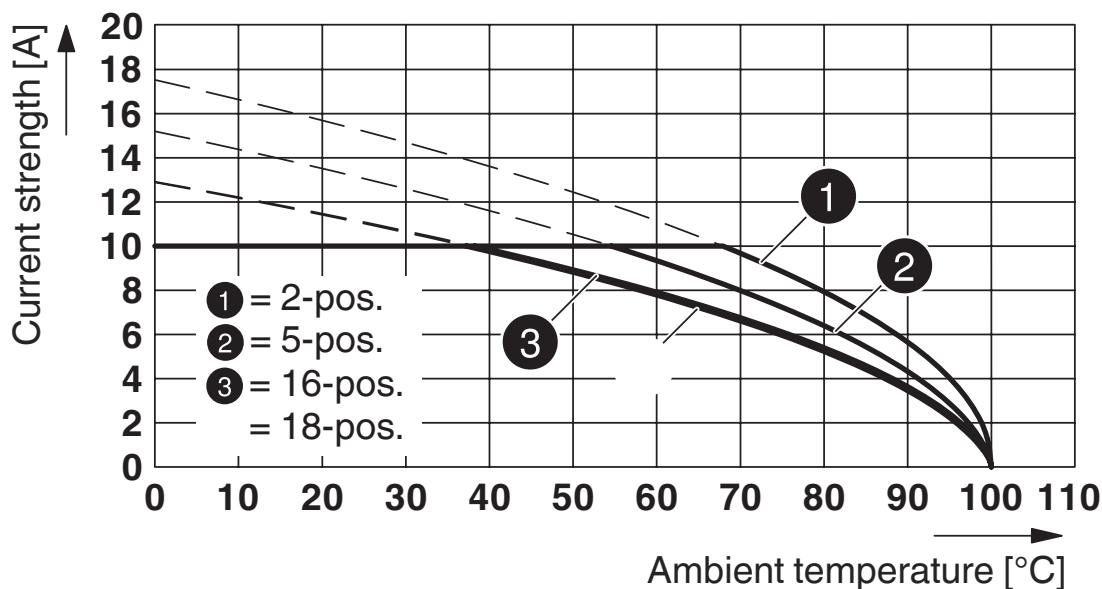
Drawings

Diagram



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

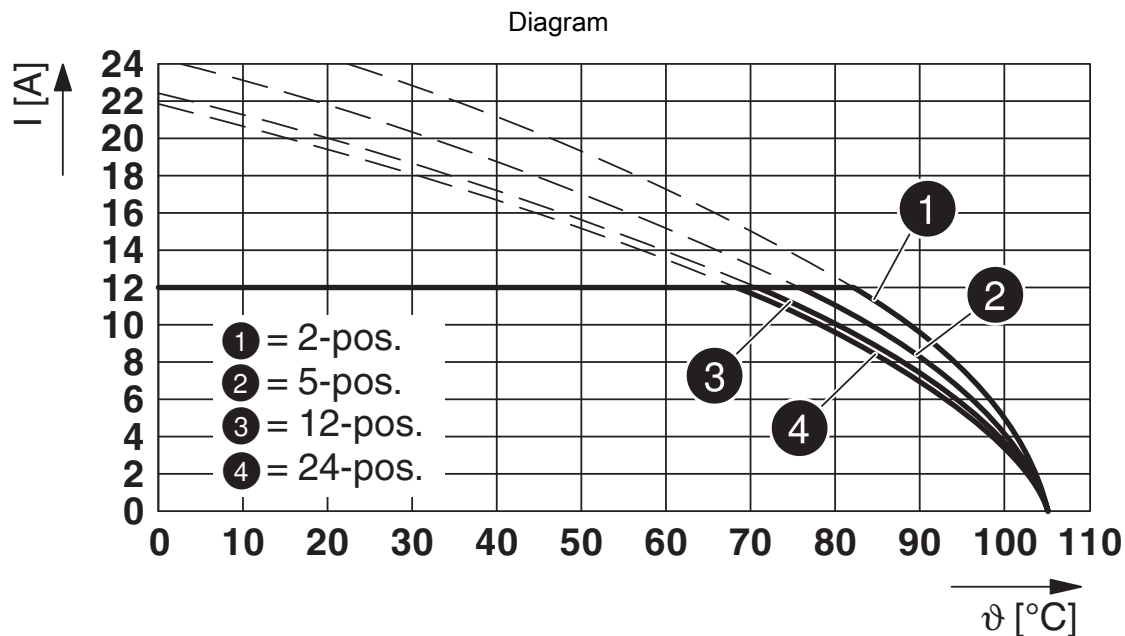
Diagram



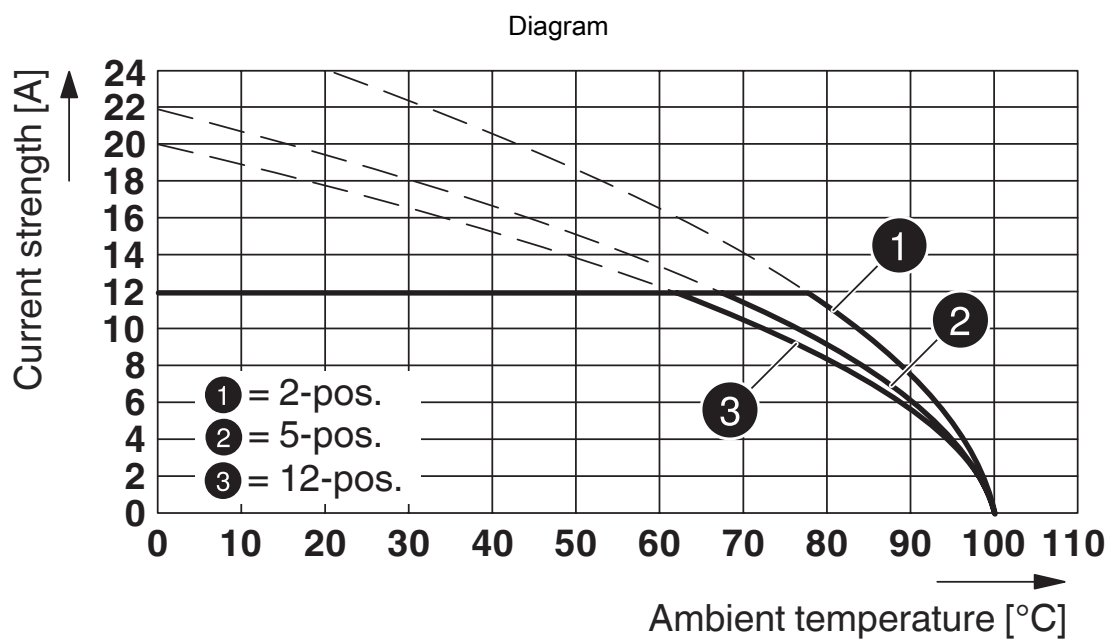
Type: FRONT-MSTB 2,5/...-STF-5,08 with MDSTBV 2,5/...-GF-5,08

1777895

<https://www.phoenixcontact.com/in/products/1777895>



Type: FRONT-MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR



Type: FRONT-MSTB 2,5/...-STF-5,08 with CC 2,5/...-GF-5,08 P26THR

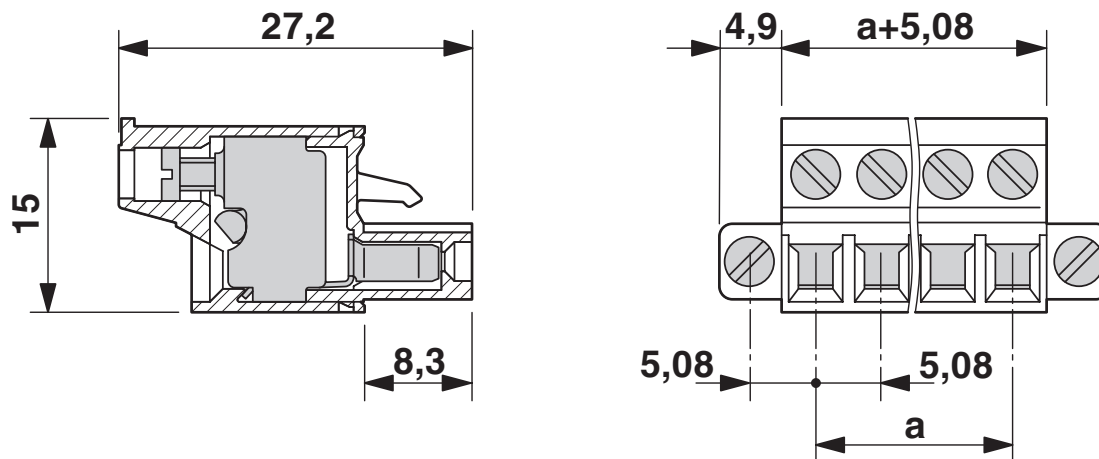
FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



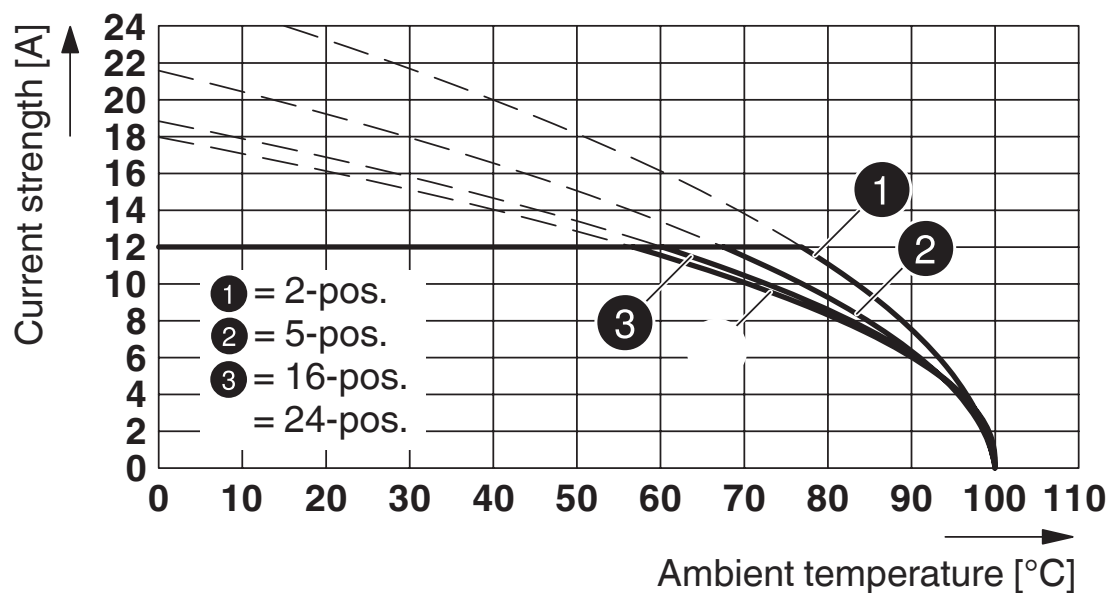
1777895

<https://www.phoenixcontact.com/in/products/1777895>

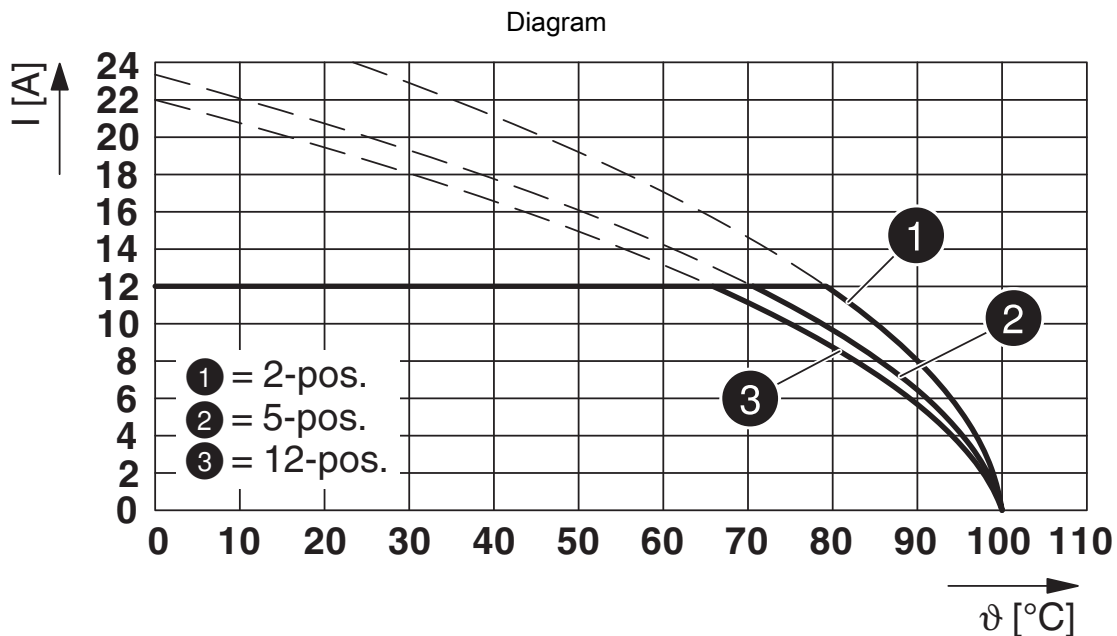
Dimensional drawing



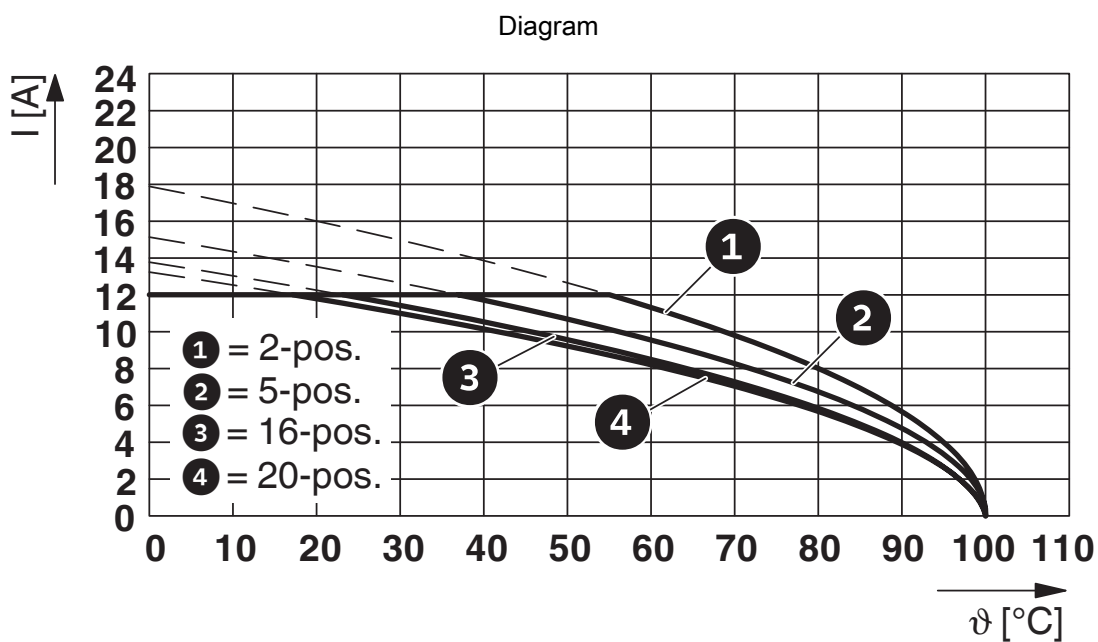
Diagram



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



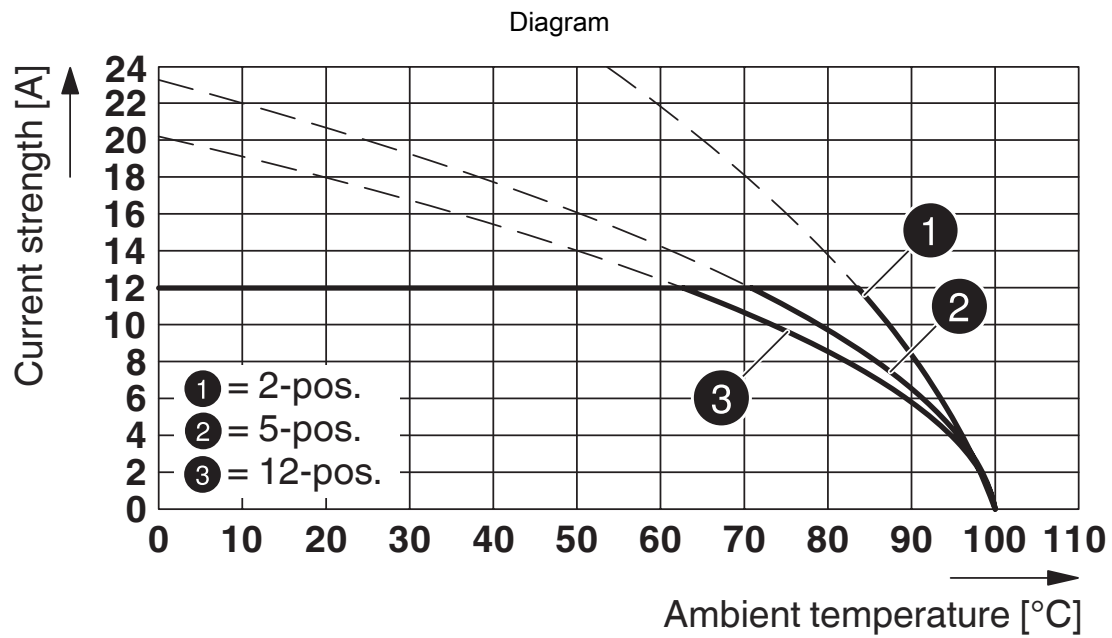
Type: FRONT-MSTB 2,5/...-STF-5,08 with CC 2,5/...-GF-5,08-LR P...THR



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

1777895

<https://www.phoenixcontact.com/in/products/1777895>



Type: FRONT-MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR


FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895


<https://www.phoenixcontact.com/in/products/1777895>


Approvals

|  CSA Approval ID: 13631 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| Use group B | 300 V | 15 A | 22 - 12 | - |
| Use group D | 300 V | 10 A | 22 - 12 | - |

|  IECEE CB Scheme Approval ID: DE1-60988-B1B2 | | | | |
|---|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 250 V | 12 A | - | 0.34 - 2.5 |

|  EAC Approval ID: B.01687 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  cULus Recognized Approval ID: E60425-19931011 | | | | |
|---|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| Use group B | 300 V | 15 A | 30 - 12 | - |
| Use group D | 300 V | 10 A | 30 - 12 | - |

|  DNV GL Approval ID: TAE00001EY | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  VDE Zeichengenehmigung Approval ID: 40050694 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 250 V | 12 A | - | 0.34 - 2.5 |

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

Classifications

ECLASS

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

ETIM

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

UNSPSC

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

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

Environmental Product Compliance

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

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

Accessories

i Note: Applying some accessories below might limit this product.

EBL 10- 5 - Insertion bridge

2303132

<https://www.phoenixcontact.com/in/products/2303132>

Insertion bridge, pitch: 5.2 mm, number of positions: 10, color: gray



i Max. current carrying capacity: 24 A

EBL 2- 5 - Insertion bridge

2303145

<https://www.phoenixcontact.com/in/products/2303145>

Insertion bridge, pitch: 5.2 mm, number of positions: 2, color: gray



i Max. current carrying capacity: 24 A

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

EBL 3- 5 - Insertion bridge

2303158

<https://www.phoenixcontact.com/in/products/2303158>

Insertion bridge, pitch: 5.2 mm, number of positions: 3, color: gray



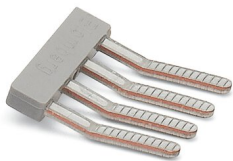
 Max. current carrying capacity: 24 A


EBL 4- 5 - Insertion bridge

2303161

<https://www.phoenixcontact.com/in/products/2303161>

Insertion bridge, pitch: 5.2 mm, number of positions: 4, color: gray



 Max. current carrying capacity: 24 A

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

FRONT-MSTB-EW - Accessories

1763058

<https://www.phoenixcontact.com/in/products/1763058>



Removal aid, for FRONT-MSTB, facilitates extraction of several plugs mounted behind each other

SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/in/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

FRONT-MSTB 2,5/12-STF-5,08 - PCB connector

1777895

<https://www.phoenixcontact.com/in/products/1777895>

CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/in/products/1734634>

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



FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



1777895

<https://www.phoenixcontact.com/in/products/1777895>

SK U/2,8 WH:UNBEDRUCKT - Marker card

0803883

<https://www.phoenixcontact.com/in/products/0803883>

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 2.8 mm, Number of individual labels: 3600

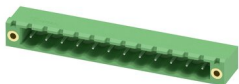


MSTB 2,5/12-GF-5,08 - PCB header

1776605

<https://www.phoenixcontact.com/in/products/1776605>

PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MSTB 2,5/..-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, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard



FRONT-MSTB 2,5/12-STF-5,08 - PCB connector



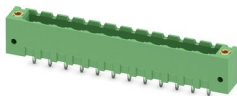
1777895

<https://www.phoenixcontact.com/in/products/1777895>

MSTBV 2,5/12-GF-5,08 - PCB header

1777170

<https://www.phoenixcontact.com/in/products/1777170>



PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MSTBV 2,5/..-GF, 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: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.

A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420

info@phoenixcontact.co.in