

Printed-circuit board connector - FRONT-MSTB 2,5/22-STF-5,08 - 1898790

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PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 22, pitch: 5.08 mm, connection method: Front screw connection, color: green, contact surface: Tin




The figure shows a 10-position version of the product

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



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 50 pc |
| GTIN |  4 017918 422660 |
| GTIN | 4017918422660 |

Technical data

Item properties

| | |
|---------------------------|---------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system | CLASSIC COMBICON |
| Type of contact | Female connector |
| Range of articles | FRONT-MSTB 2,5/...-STF |
| Pitch | 5.08 mm |
| Number of positions | 22 |
| Connection method | Front screw connection |
| Drive form screw head | Slotted |
| Screw thread | M2,5 |

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Technical data

Item properties

| | |
|-----------------------|--------------|
| Locking | Screw flange |
| Number of levels | 1 |
| Number of connections | 22 |
| Number of potentials | 22 |

Electrical parameters

| | |
|-----------------------------|-------|
| Nominal current | 12 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 | Front screw connection |
| pluggable | Yes |
| Conductor cross section solid | 0.34 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 ... 1.5 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 |
| Torque | 0.5 Nm ... 0.6 Nm |

Specifications for ferrules

| | |
|--|--|
| Recommended crimping pliers | 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 |
| Recommended crimping pliers | 1212034 CRIMPFOX 6 |
| Ferrules with insulating collar, according to DIN 46228-4 | Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm |

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Technical data

Specifications for ferrules

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

Flange specifications

| | |
|-----------------|---------------|
| Type of locking | Screw locking |
| Mounting flange | Screw flange |

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

| | |
|---|--------------|
| 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] | 27.2 mm |
| Width [w] | 121.56 mm |
| Height [h] | 15 mm |
| Pitch | 5.08 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. |
|------|--|

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Technical data

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 | 0.34 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 |

Mechanical tests according to standard

| | |
|-------------------------------------|------------------------|
| Test specification | IEC 61984 |
| Visual inspection | IEC 60512-1-1:2002-02 |
| Dimension check | IEC 60512-1-2:2002-02 |
| Resistance of inscriptions | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | IEC 60512-13-2:2006-02 |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 12 N |
| Withdraw strength per pos. approx. | 9 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |
| Contact holder in insert | IEC 60512-15-1:2008-05 |
| Test force per pos. | 44 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

| | |
|---------------|--|
| Caption | Type: FRONT-MSTB 2,5/...-STF-5,08 with MDSTB 2,5/...-GF-5,08 |
| Specification | IEC 61984:2008-10 |

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Technical data

Current carrying capacity / derating curves

| | |
|------------------|---|
| Reduction factor | 0.8 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| | For number of positions, see diagram |

Mechanical tests (A)

| | |
|--|-------------|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 12 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 | 1.9 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 1.9 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |
| Insulation resistance, neighboring positions | > 0.2 TΩ |

Thermal tests (C)

| | |
|---|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 17 |
| Conductor cross section | 2.5 mm ² |
| Test current | 10 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 |

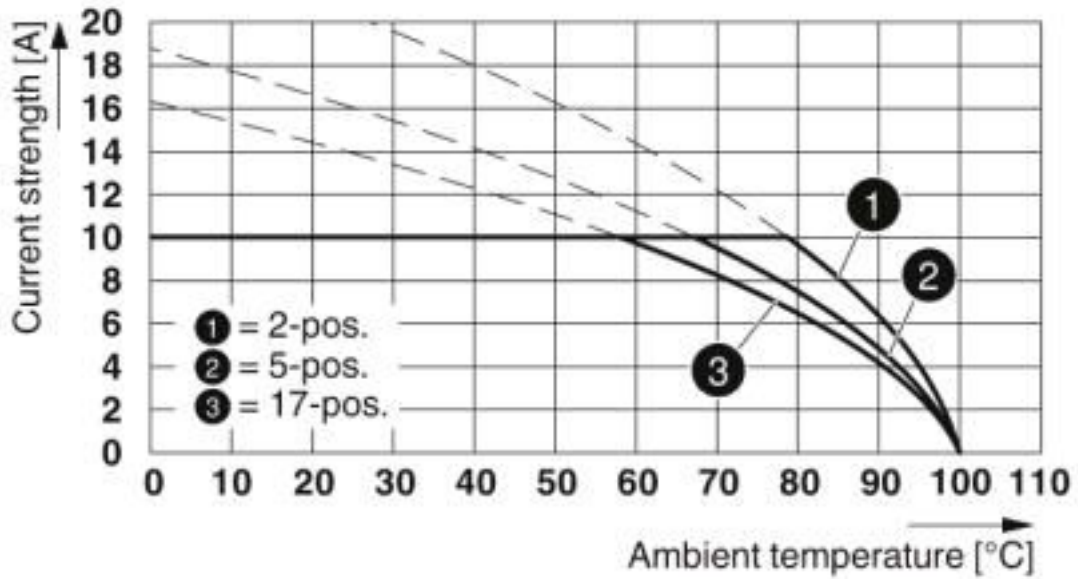
Environmental Product Compliance

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

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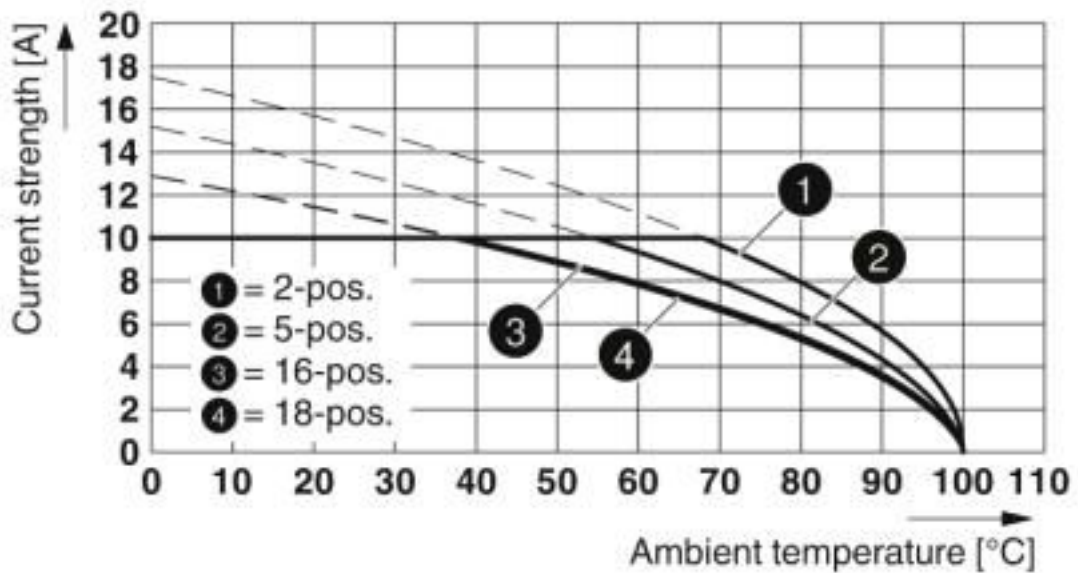
Drawings

Diagram



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

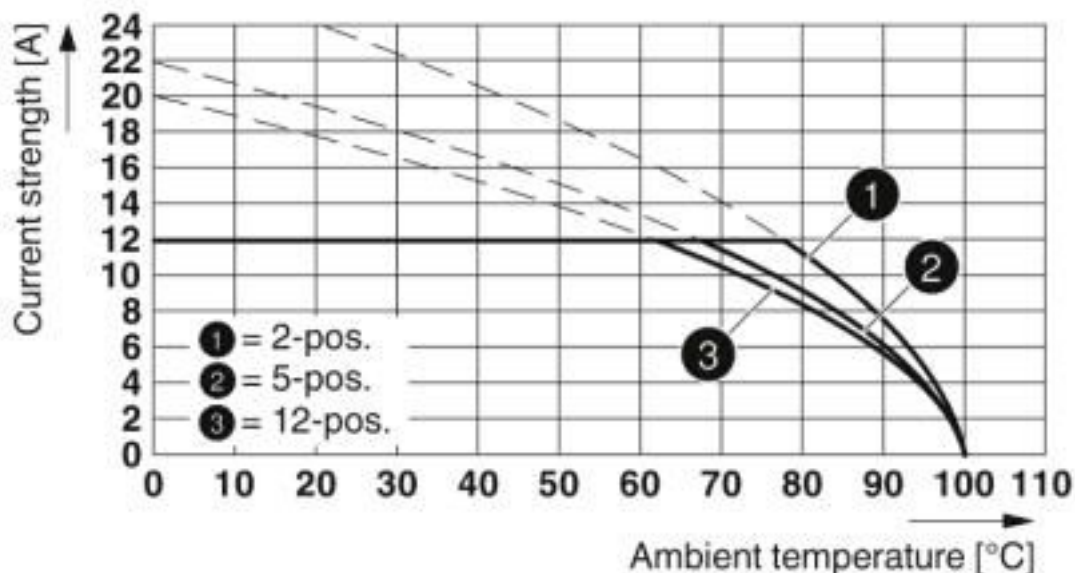
Diagram



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

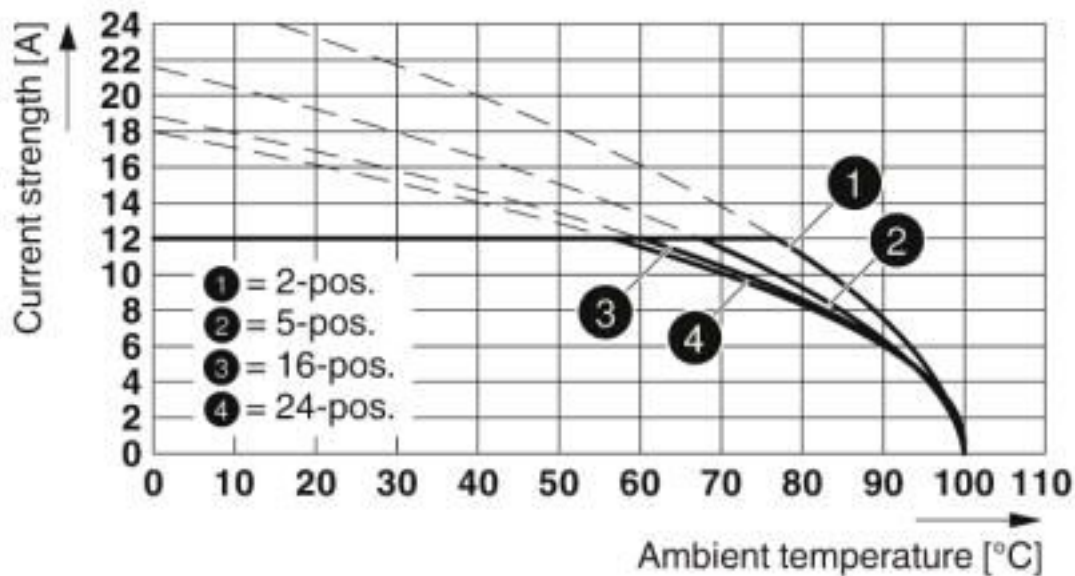
Printed-circuit board connector - FRONT-MSTB 2,5/22-STF-5,08 - 1898790

Diagram



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

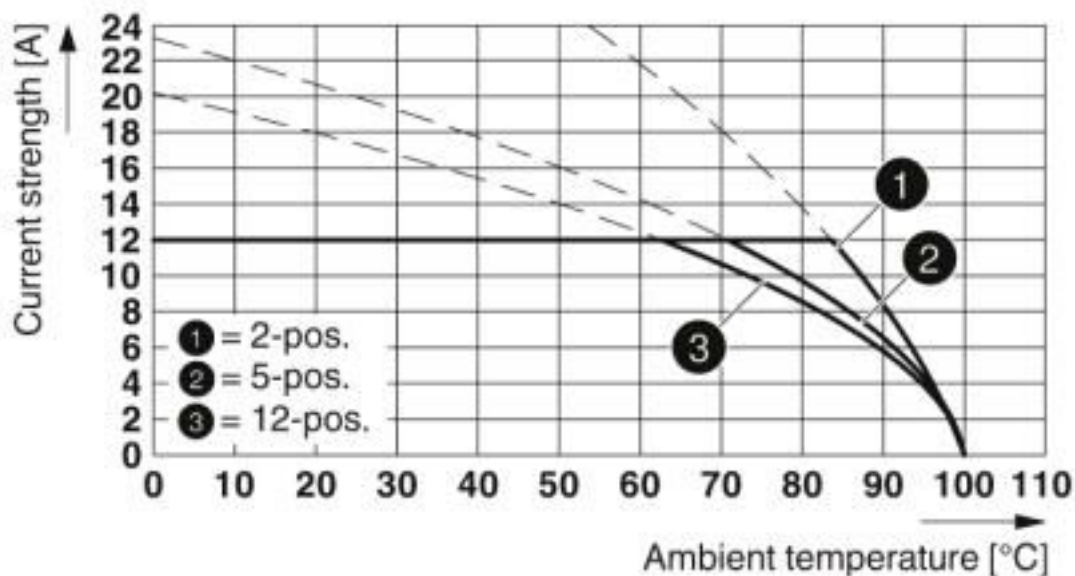
Diagram



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

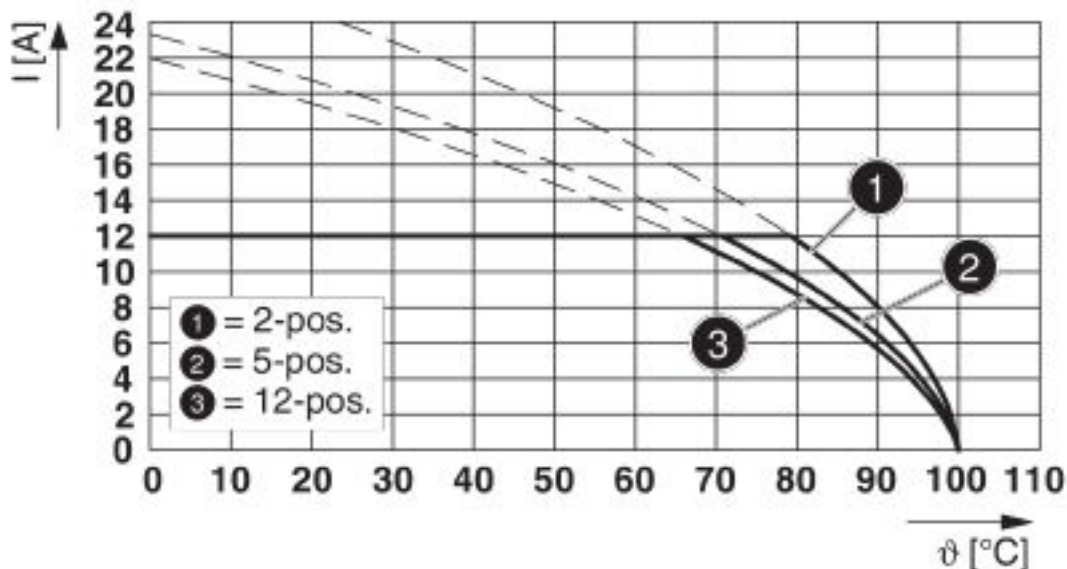
Printed-circuit board connector - FRONT-MSTB 2,5/22-STF-5,08 - 1898790

Diagram



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

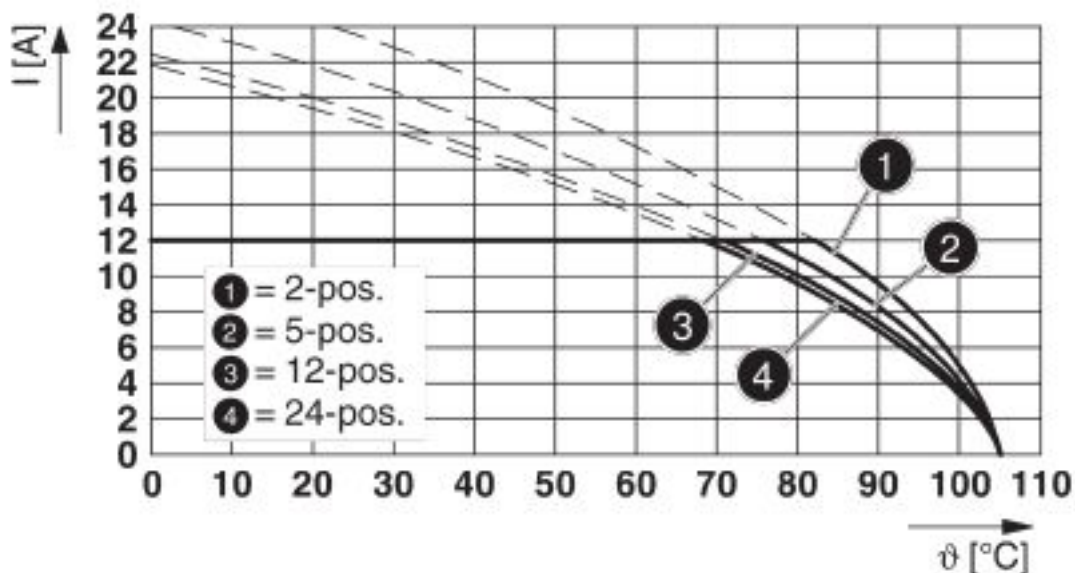
Diagram



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

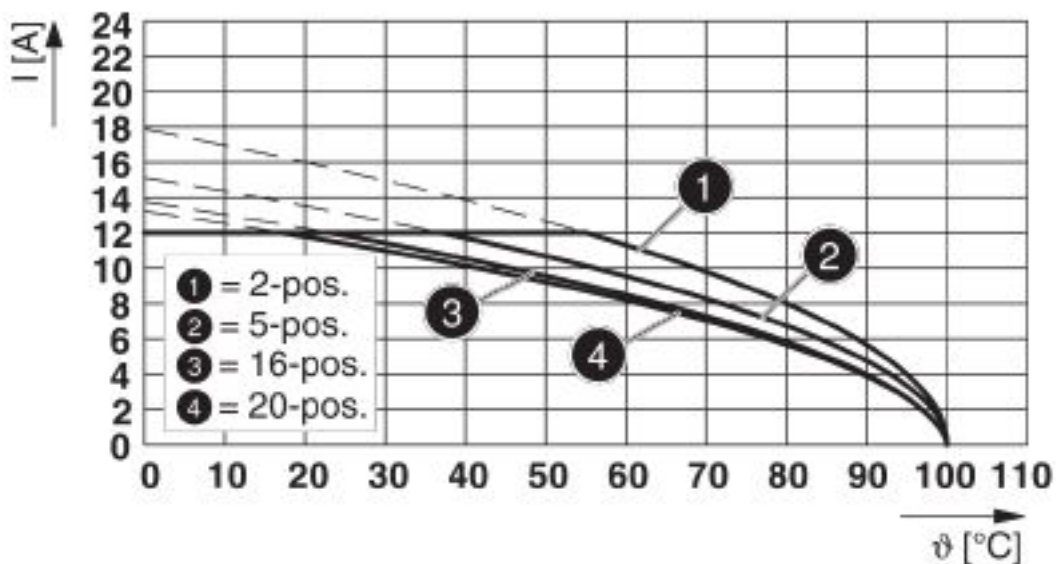
Printed-circuit board connector - FRONT-MSTB 2,5/22-STF-5,08 - 1898790

Diagram



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

Diagram



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

Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
|---------------|----------|

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Classifications

eCl@ss

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

DNV GL / CSA / IECCEB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

Printed-circuit board connector - FRONT-MSTB 2,5/22-STF-5,08 - 1898790

Approvals

| | | | |
|--------|--|---|------------|
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAE00001EY |
|--------|--|---|------------|

| | | | |
|----------------------------|-------|---|-------|
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 15 A | 10 A | |
| mm ² /AWG/kcmil | 22-12 | 22-12 | |

| | | | |
|----------------------------|----------|---|----------------|
| IECEE CB Scheme | | http://www.iecee.org/ | DE1-60988-B1B2 |
| Nominal voltage UN | 250 V | | |
| Nominal current IN | 12 A | | |
| mm ² /AWG/kcmil | 0.34-2.5 | | |

| | | |
|-----|--|---------|
| 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 | 15 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 | 40050694 |
| Nominal voltage UN | 250 V | | |
| Nominal current IN | 12 A | | |
| mm ² /AWG/kcmil | 0.34-2.5 | | |

Printed-circuit board connector - FRONT-MSTB 2,5/22-STF-5,08 - 1898790

Accessories

Accessories

Assembly tool

Accessories - FRONT-MSTB-EW - 1763058



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

Coding element

Coding profile - CP-MSTB - 1734634



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

Insertion bridge

Insertion bridge - EBL 10- 5 - 2303132



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

Insertion bridge - EBL 2- 5 - 2303145



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

Insertion bridge - EBL 3- 5 - 2303158



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

Printed-circuit board connector - FRONT-MSTB 2,5/22-STF-5,08 - 1898790

Accessories

Insertion bridge - EBL 4- 5 - 2303161



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

Insertion bridge - EBL 5- 5 - 2303174



Insertion bridge, pitch: 5.2 mm, number of positions: 5, color: gray

Labeled terminal marker

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

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 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

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Accessories

Terminal marking

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

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[PVP02-5,00](#) [PVP03-3,50](#) [PVP04-3,50](#) [PVS02-5,00](#) [1-1986160-3](#) [1377680000](#) [1531000000](#) [1546228-5](#) [ELFH16150](#) [ELFP03110](#)
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