# MSTB 2,5/ 9-ST-5,08 GY7035 - PCB connector

1702951

https://www.phoenixcontact.com/us/products/1702951

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 mm$^2$, color: light gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 9, number of rows: 1, number of positions: 9, number of connections: 9, product range: MSTB 2,5/..-ST, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting method: without, type of packaging: packed in cardboard

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors

## Commercial data

| | |
|---|---|
| Item number | 1702951 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Note | Made to order (non-returnable) |
| Sales key | AA33 |
| Product key | AACAGC |
| GTIN | 4046356629331 |
| Weight per piece (including packing) | 15.42 g |
| Weight per piece (excluding packing) | 14.894 g |
| Customs tariff number | 85366990 |
| Country of origin | US |

# Technical data

## Product properties

| | |
|---|---|
| Product type | PCB connector |
| Product family | MSTB 2,5/..-ST |
| Product line | COMBICON Connectors M |
| Number of positions | 9 |
| Pitch | 5.08 mm |
| Number of connections | 9 |
| Number of rows | 1 |
| Number of potentials | 9 |
| Mounting type | without |

Fitting of components

| | |
|---|---|
| Partial assembly | No |

## Electrical properties

Properties

| | |
|---|---|
| Nominal current $I_N$ | 12 A |
| Nominal voltage $U_N$ | 320 V |
| Contact resistance | 1.3 mΩ |
| 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 mm² |
| Contact connection type | Socket |

Interlock

| | |
|---|---|
| Locking type | without |
| Mounting type | without |

Conductor connection

| | |
|---|---|
| Connection method | Screw connection with tension sleeve |
| Conductor/PCB connection direction | 0 ° |
| Conductor cross-section rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 2.5 mm² |

| | |
|---|---|
| Conductor cross-section AWG | 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, rigid | 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 |
| Drive form screw head | Slotted (L) |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Specifications for ferrules without insulating collar

| | |
|---|---|
| recommended crimping tool | 1212034 CRIMPFOX 6 |

Specifications for ferrules with insulating collar

| | |
|---|---|
| recommended crimping tool | 1212034 CRIMPFOX 6 |

## Material specifications

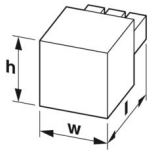
Material data - contact

| | |
|---|---|
| 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 (5 µm - 7 µm Sn) |
| Metal surface contact area (top layer) | Tin (5 µm - 7 µm Sn) |

Material data - housing

| | |
|---|---|
| Color (Housing) | light gray (7035) |
| 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

| | |
|---|---|
| Dimensional drawing |  |
| Pitch | 5.08 mm |
| Width [w] | 45.72 mm |
| Height [h] | 15 mm |
| Length [l] | 18.3 mm |

## 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 | 0.2 mm² / solid / > 10 N |
| | 0.2 mm² / flexible / > 10 N |
| | 2.5 mm² / solid / > 50 N |
| | 2.5 mm² / flexible / > 50 N |

Insertion and withdrawal forces

| | |
|---|---|
| Specification | IEC 60512-13-2:2006-02 |
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |

Torque test

| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |

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

Durability test

| | |
|---|---|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 4.8 kV |
| Contact resistance $R_1$ | 1.3 mΩ |
| Contact resistance $R_2$ | 1.4 mΩ |
| Insertion/withdrawal cycles | 25 |

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 |

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) |
| Acceleration | 5g (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

Ambient conditions

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

## 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 |

Air clearances and creepage distances |

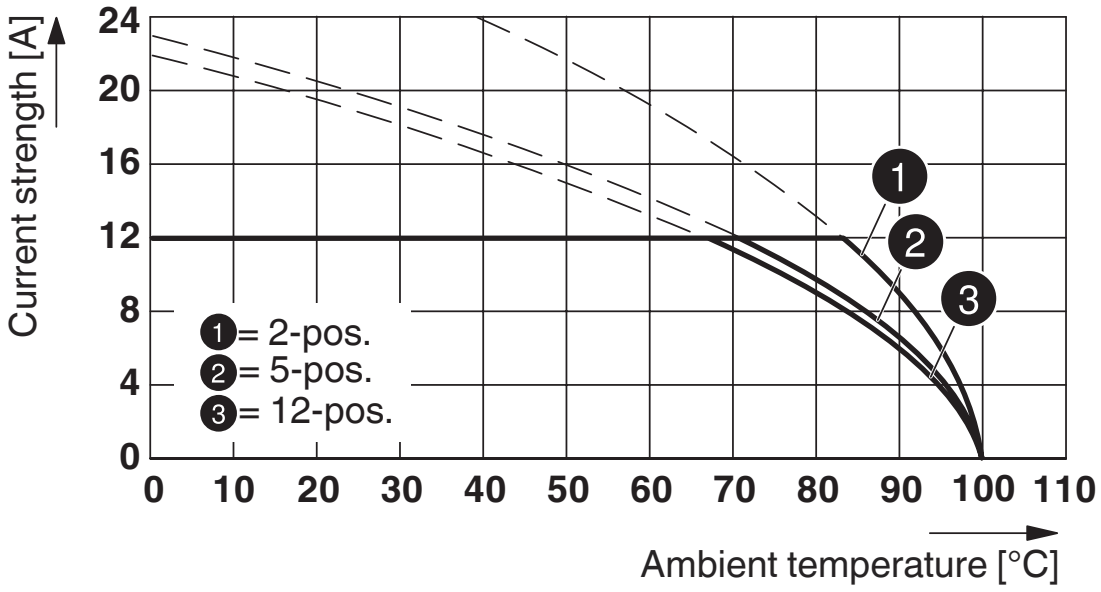
| | |
|---|---|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum 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 |

## Packaging specifications

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

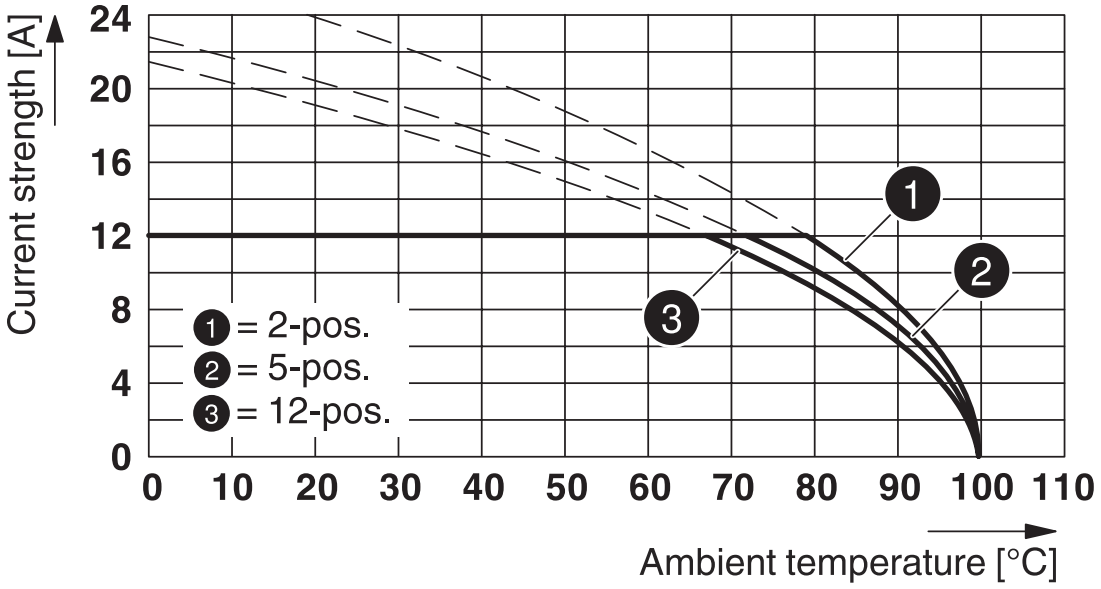
## Drawings

Diagram



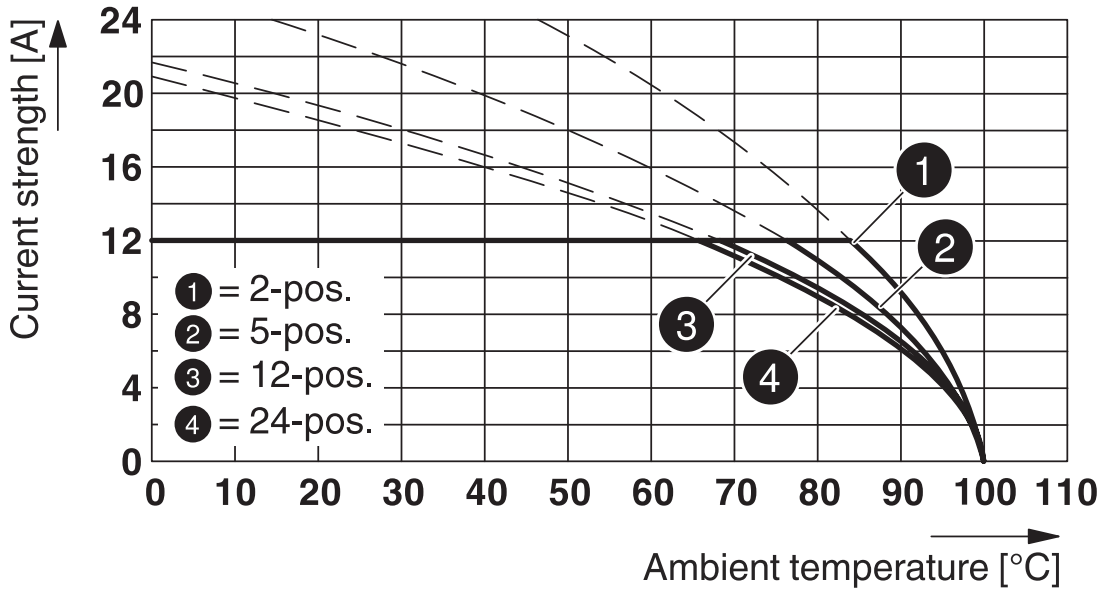

Type: MSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

Diagram



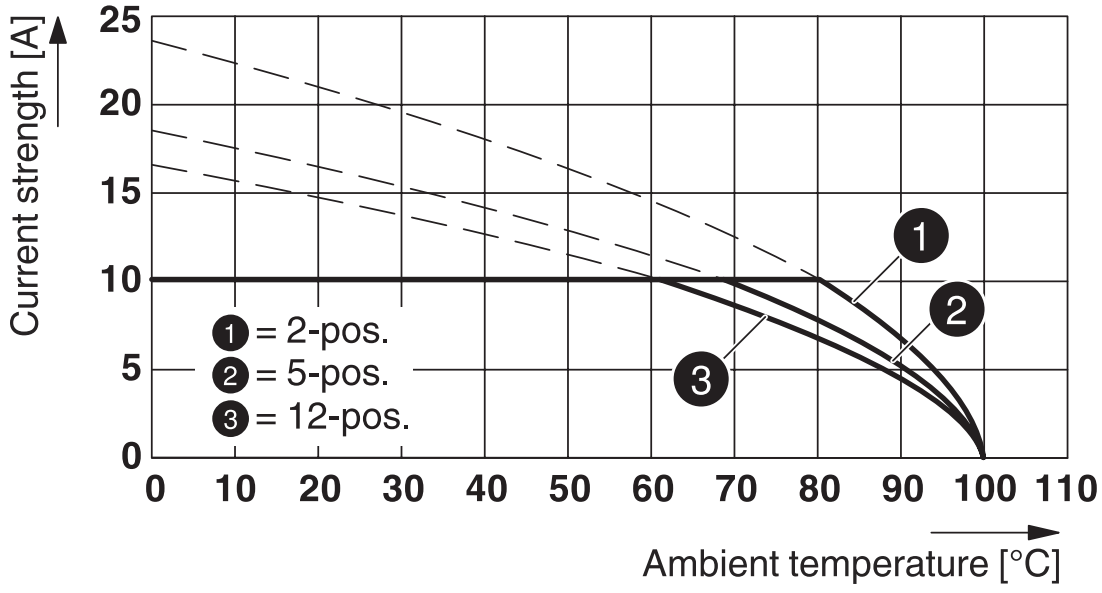

Type: MSTB 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P26THR

Diagram



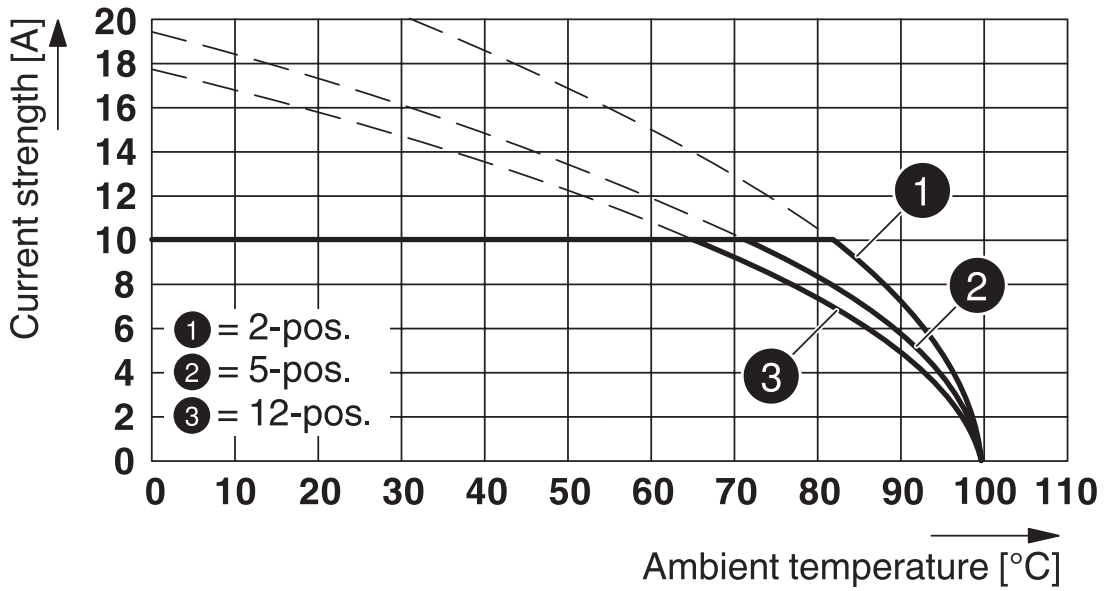

Type: MSTB 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P26THR

Diagram



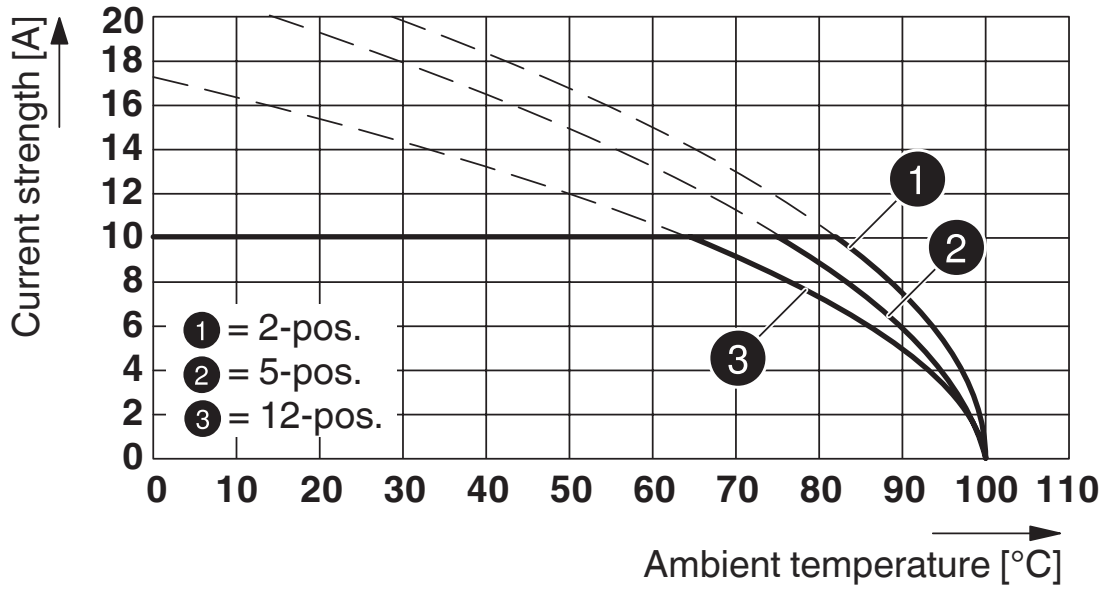

Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G-5,08

Diagram



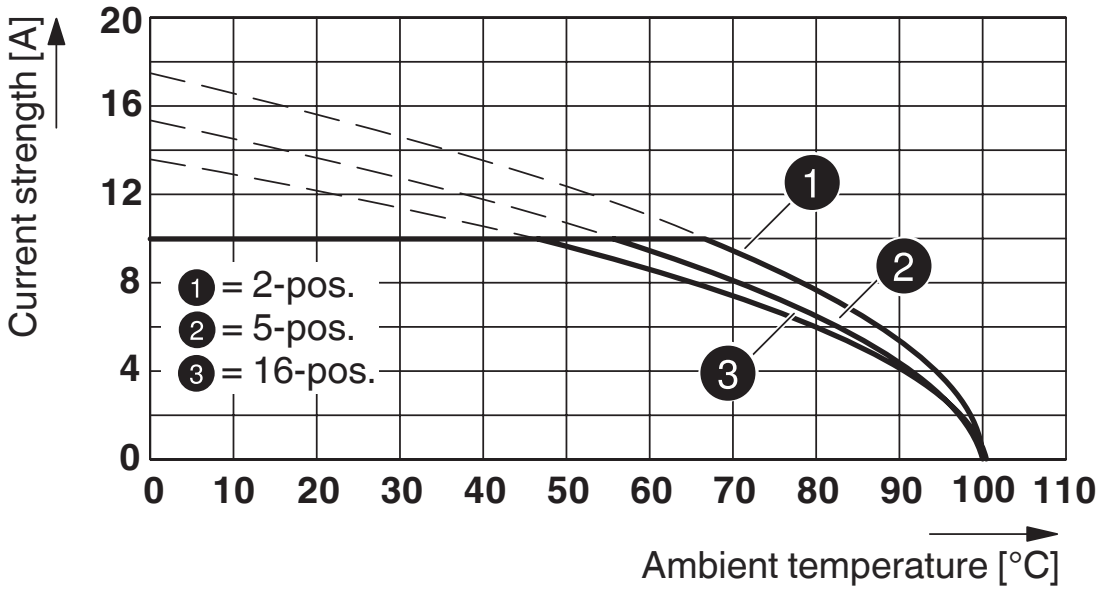

Type: MSTB 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08

Diagram



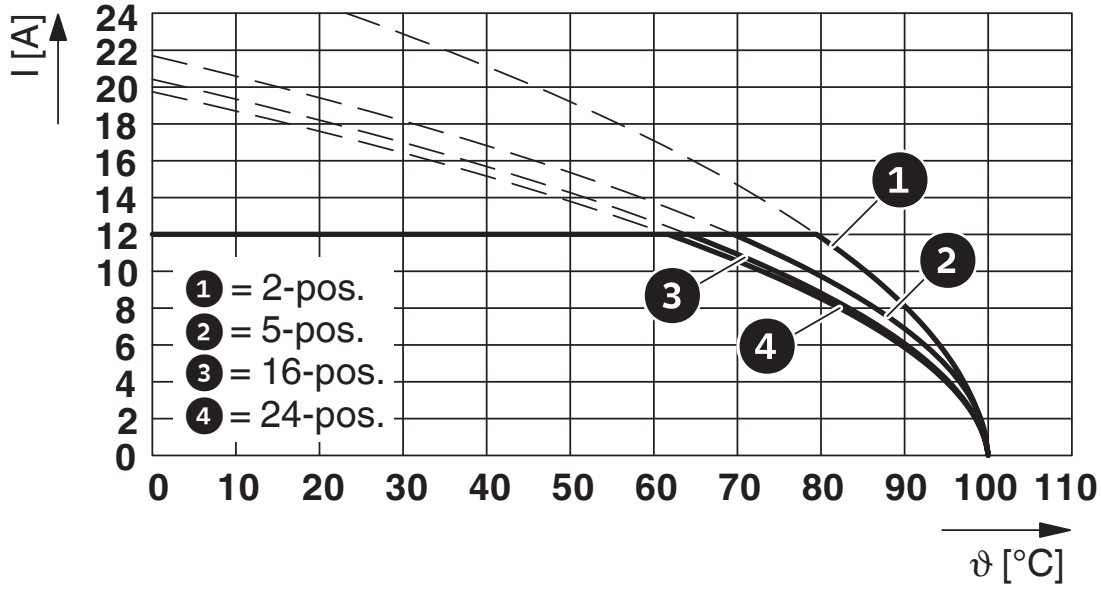

Type: MSTB 2,5/...-ST-5,08 with MDSTBW 2,5/...-G-5,08

Diagram



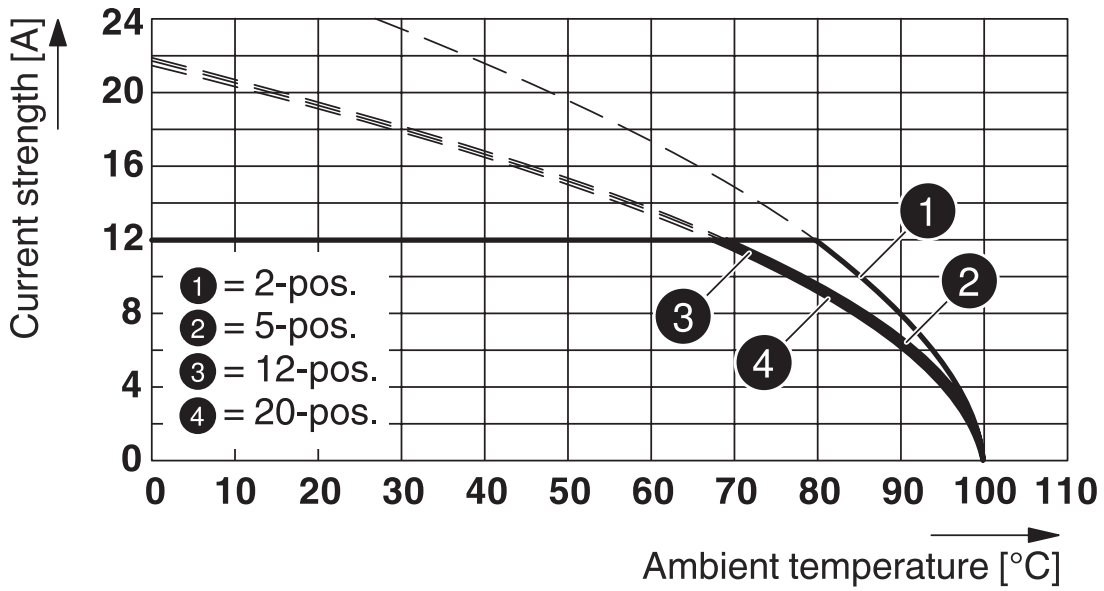

Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G-5,08

Diagram



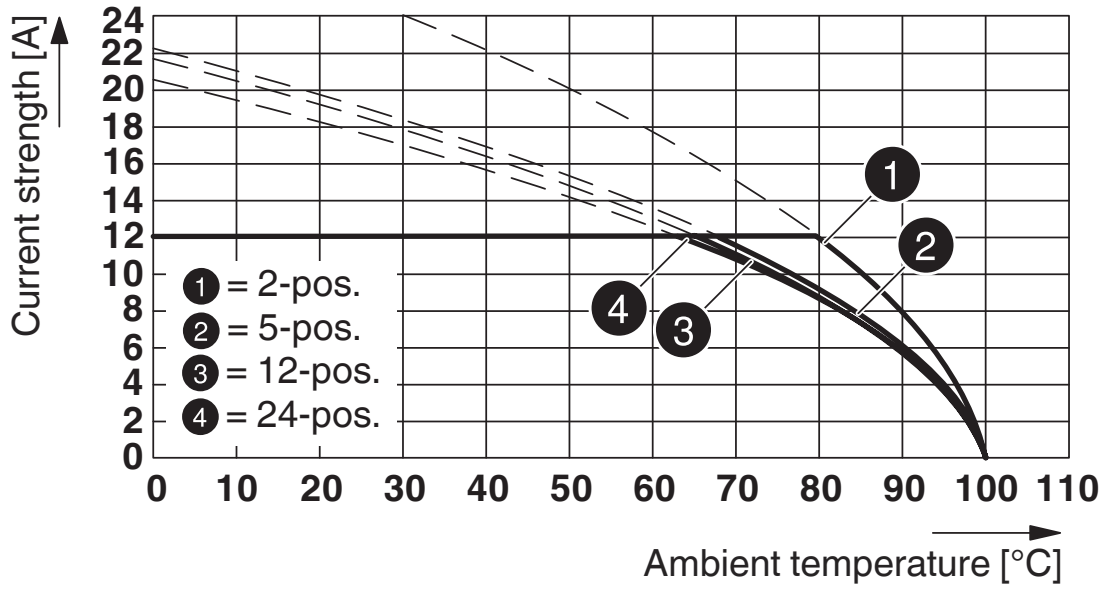

Type: MSTB 2,5/...-ST-5,08 with SMSTB 2,5/...-G-5,08

Diagram



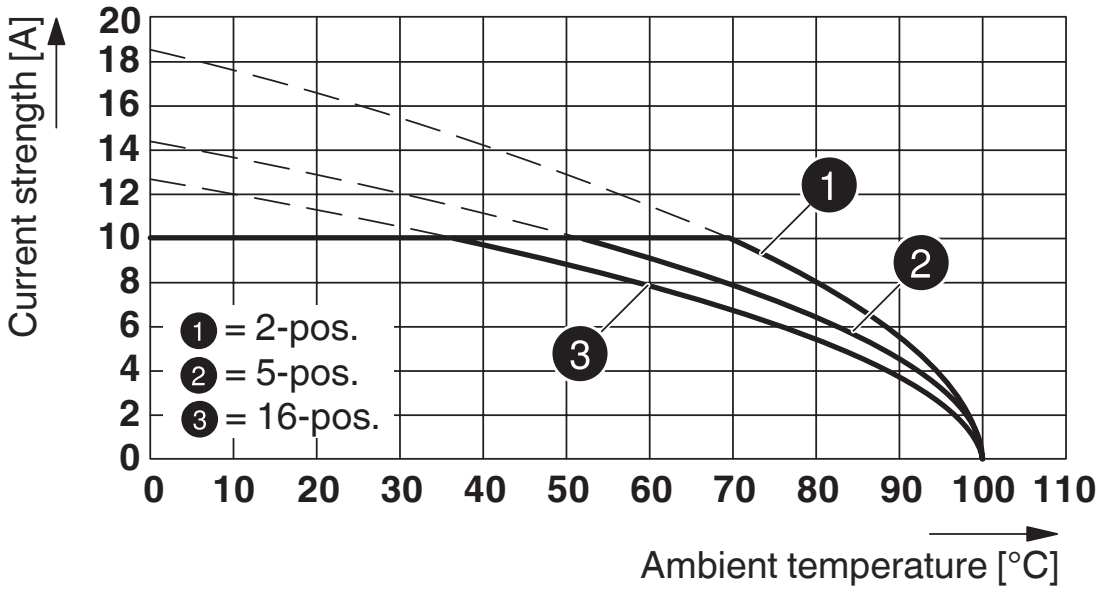

Type: MSTB 2,5/...-ST-5,08 with MVSTBU 2,5/...-GB-5,08

Diagram



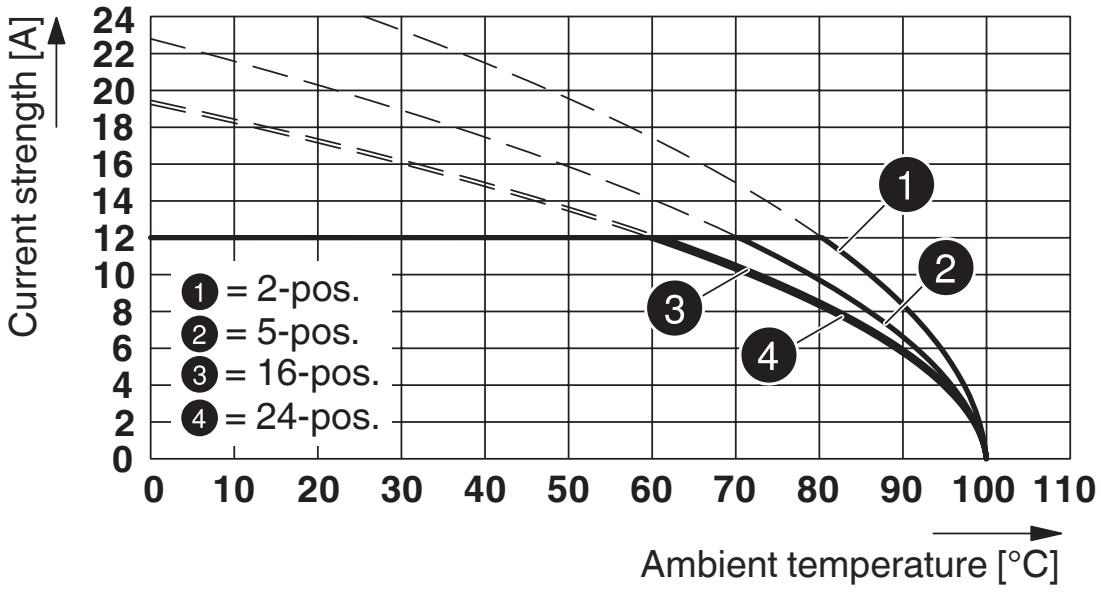

Type: MSTB 2,5/...-ST-5,08 with MSTB 2,5/...-G-5,08

Diagram



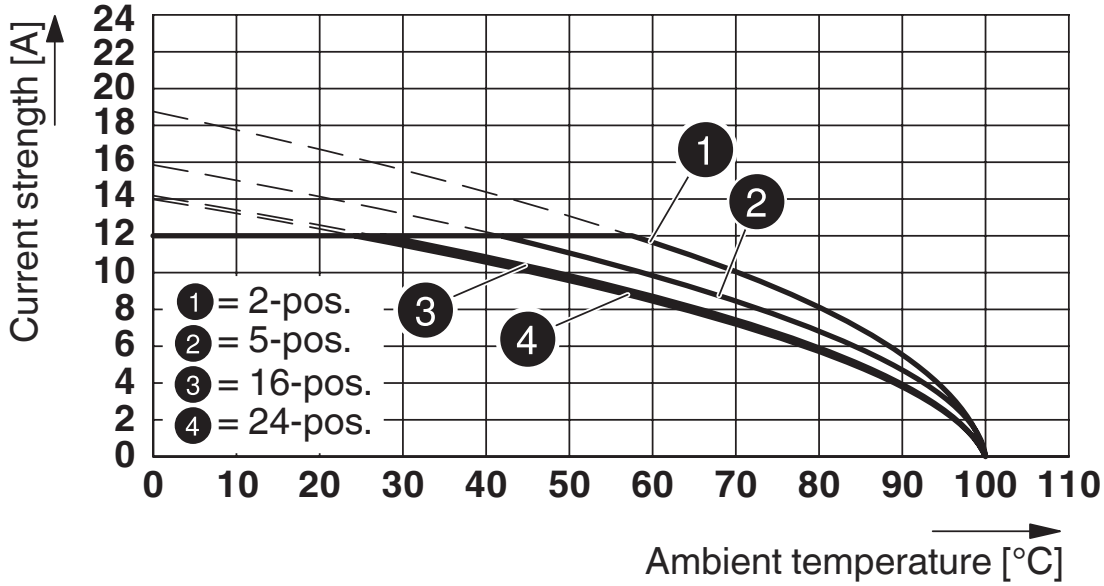

Type: MSTB 2,5/...-ST-5,08 with MDSTBVA 2,5/...-G-5,08

Diagram



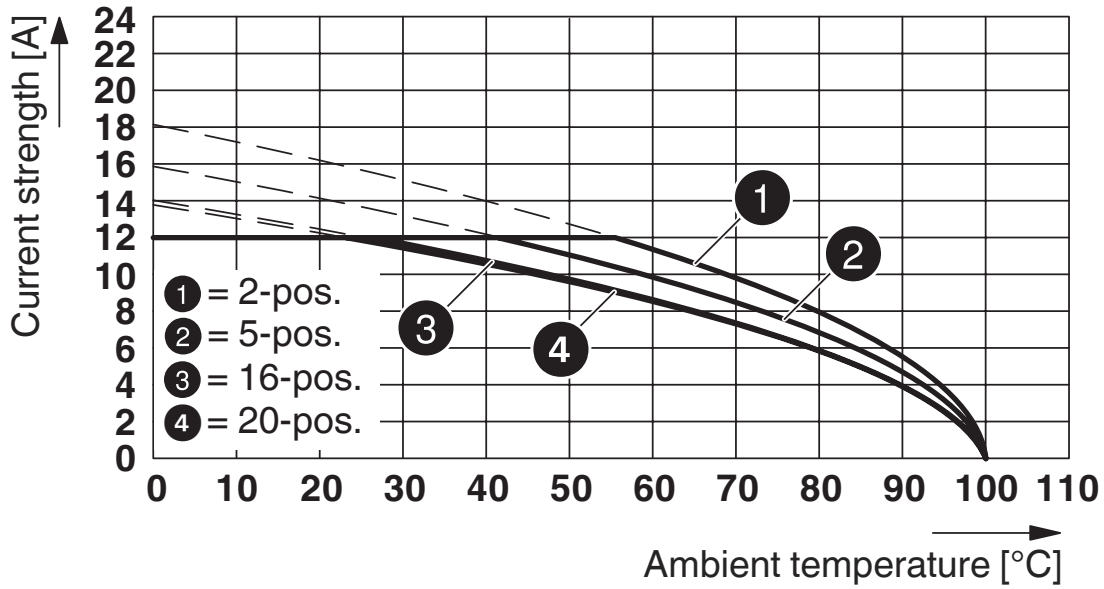

Type: MSTB 2,5/...-ST-5,08 with MSTBW 2,5/...-G-5,08

Diagram



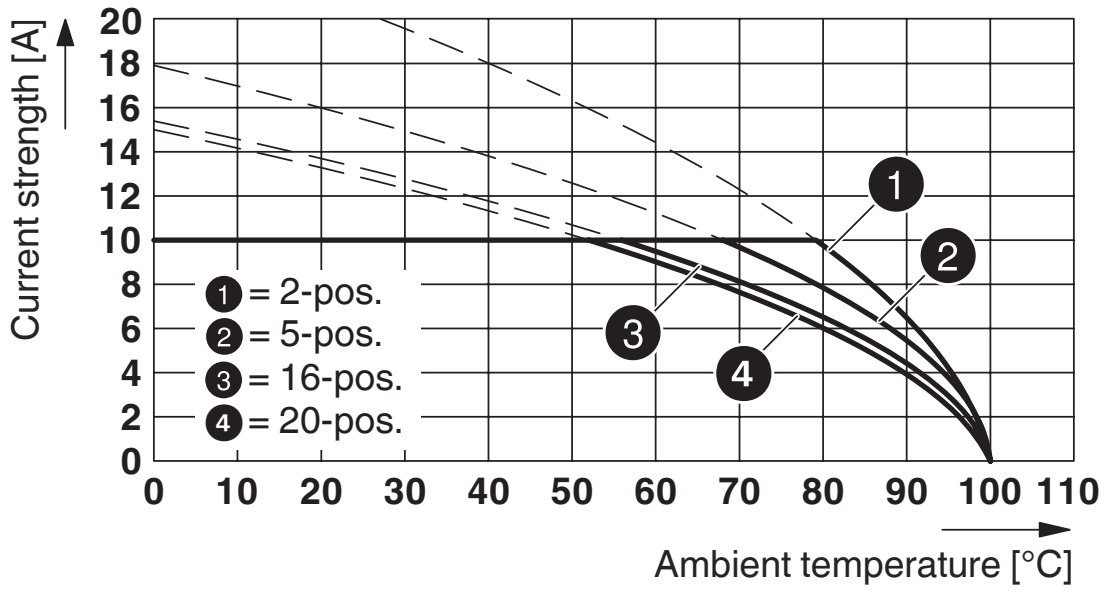

Type: MSTB 2,5/...-ST-5,08 with MSTBVA 2,5/...-G-5,08

Diagram



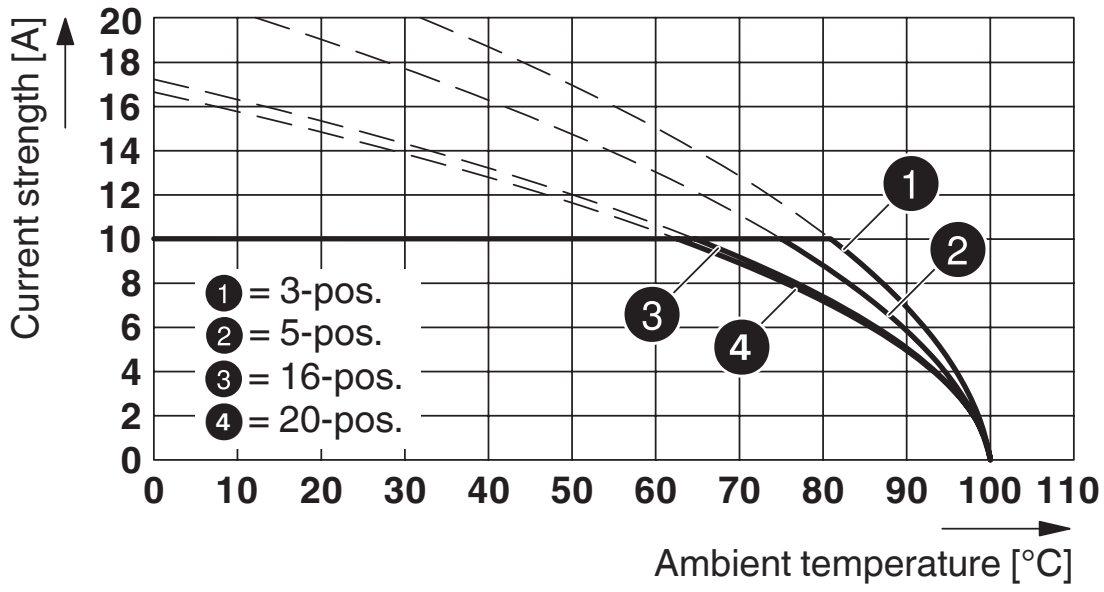

Type: MSTB 2,5/...-ST-5,08 with MSTBV 2,5/...-G-5,08

Diagram



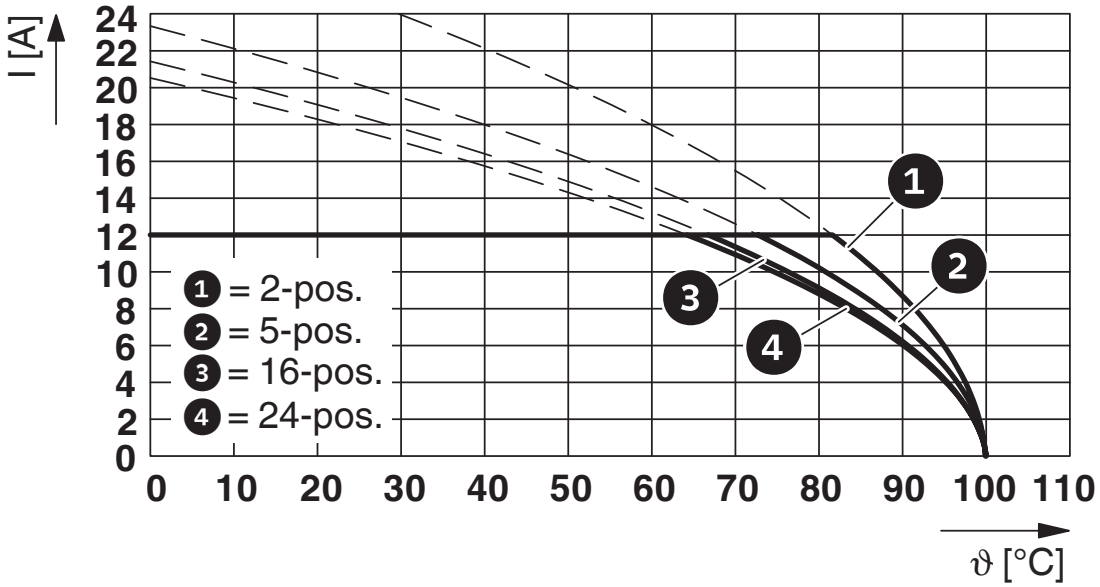

Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G1-5,08

Diagram



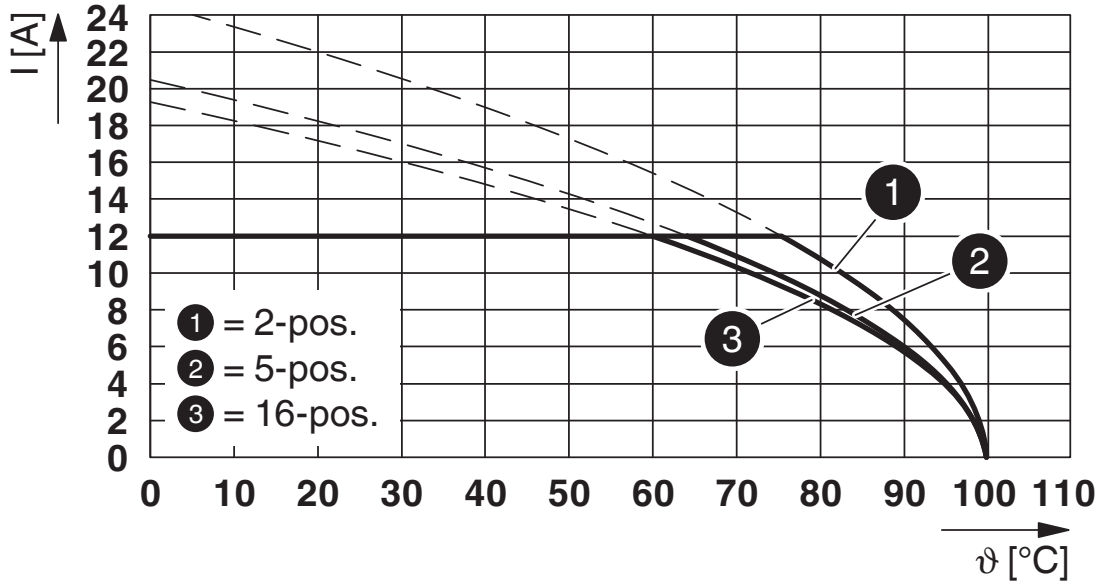

Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G1-5,08

Diagram



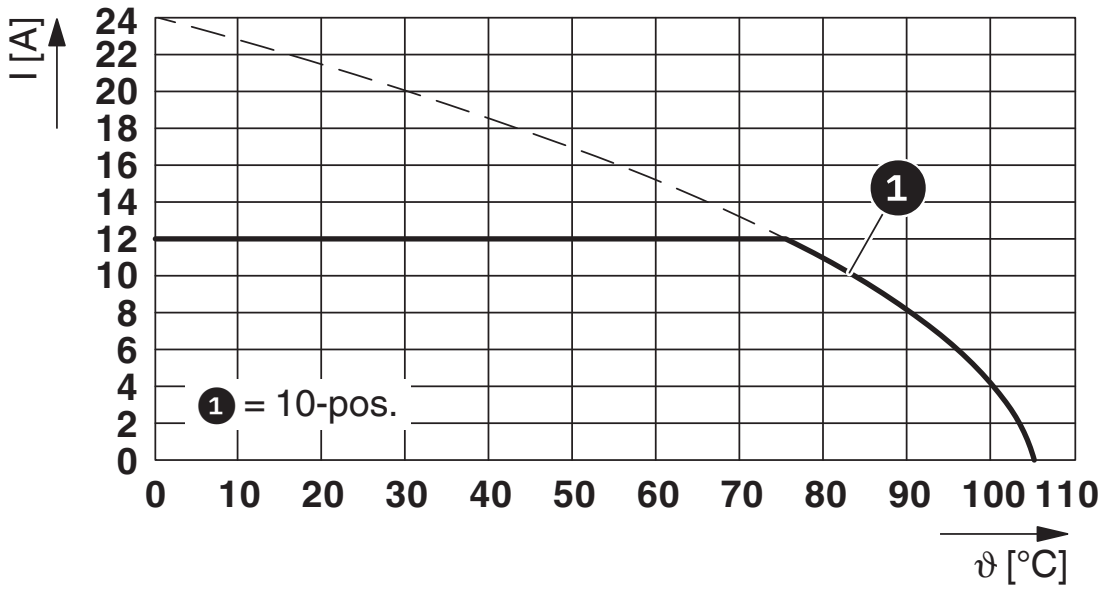

Type: MSTB 2,5/...-ST-5,08 with SMSTBA 2,5/...-G-5,08

Diagram



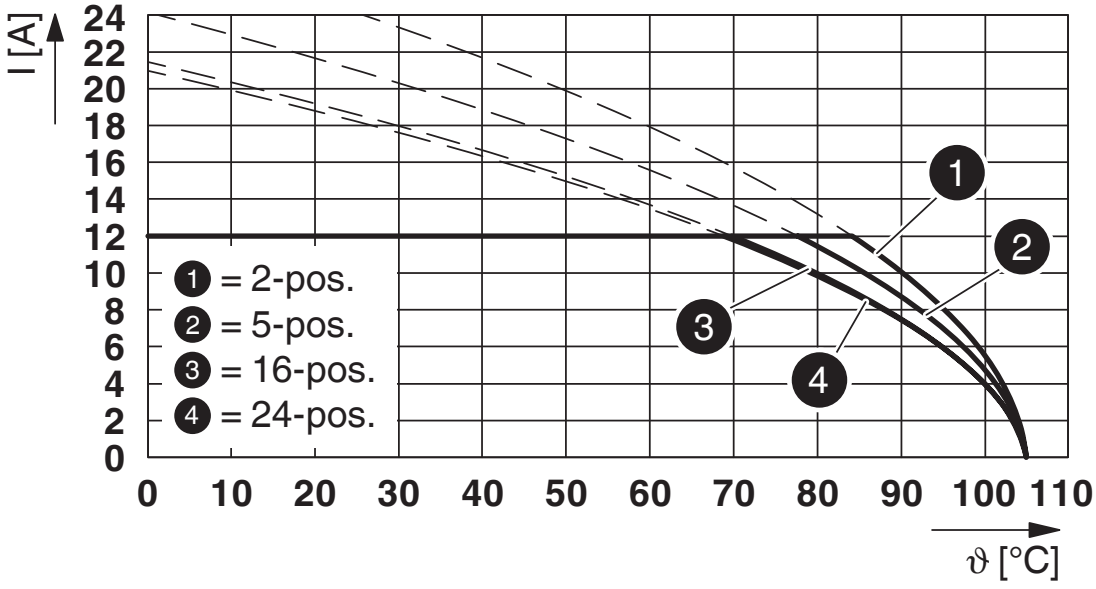

Type: MSTB 2,5/...-ST-5,08 with DFK-MSTBA 2,5/...-G-5,08

Diagram



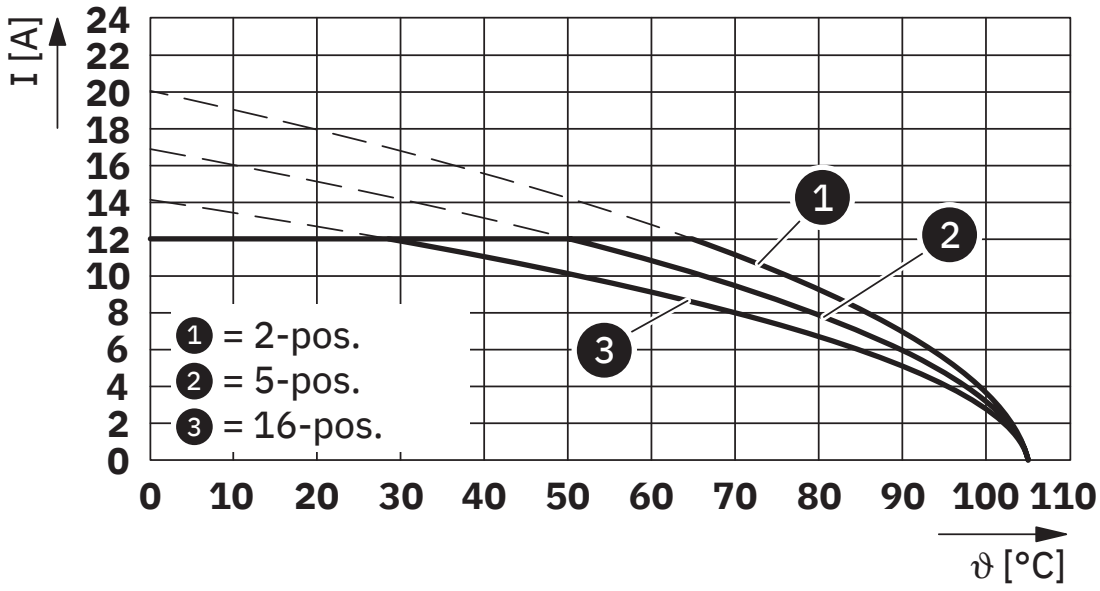

Type: MSTB 2,5/...-ST-5,08 with MSTBHK 2,5/...-G-5,08

Diagram



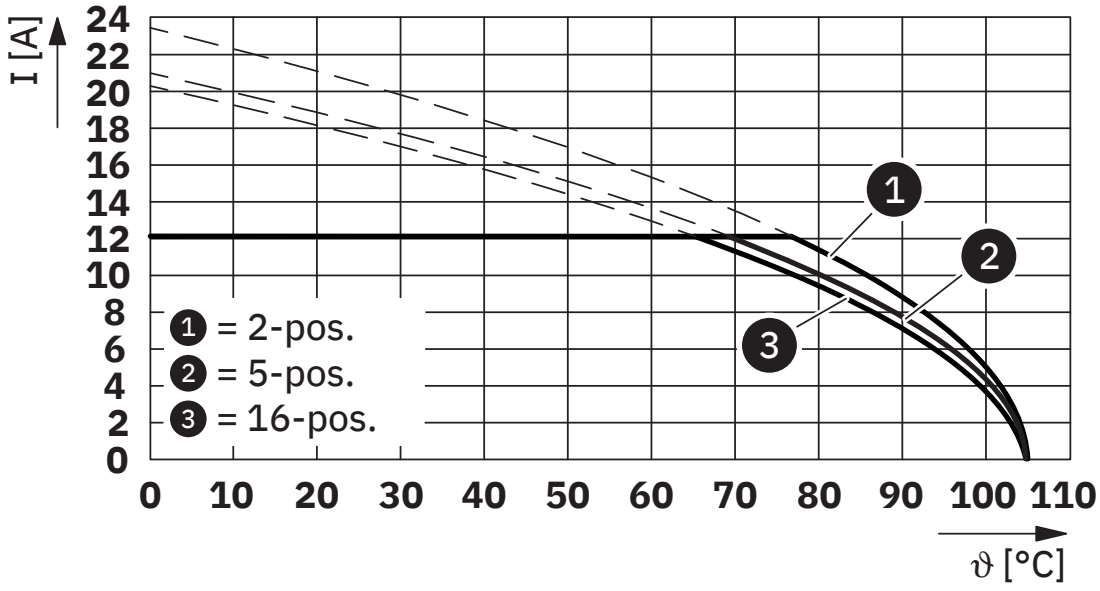

Type: MSTB 2,5/...-ST-5,08 with MSTBA 2,5/...-G-5,08

Diagram



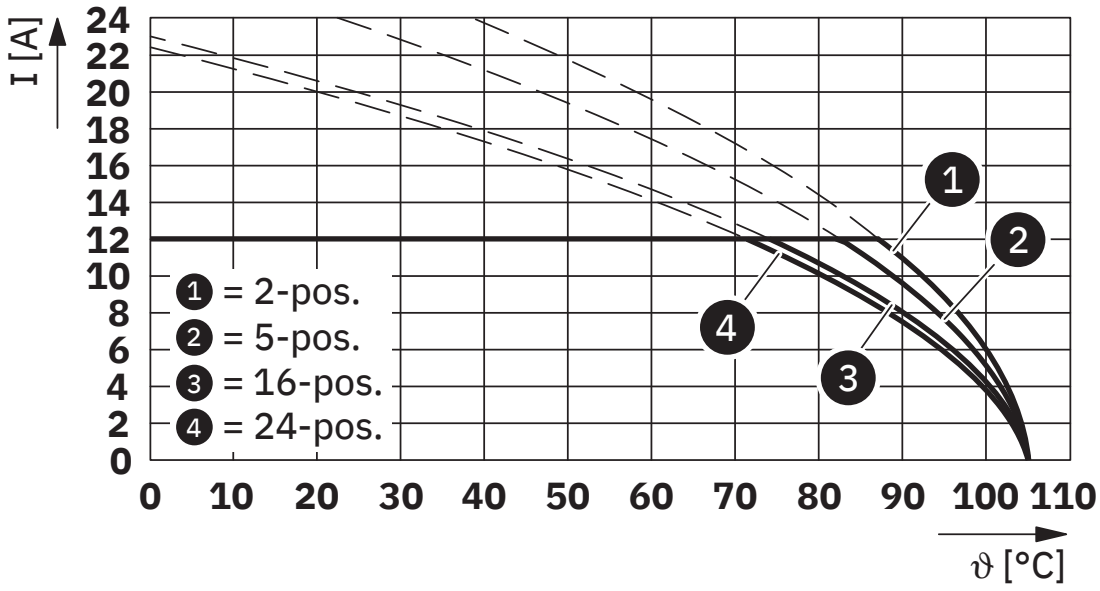

Type: MSTB 2,5/...-ST-5,08 with DFK-MSTBVA 2,5/...-G-5,08

Diagram



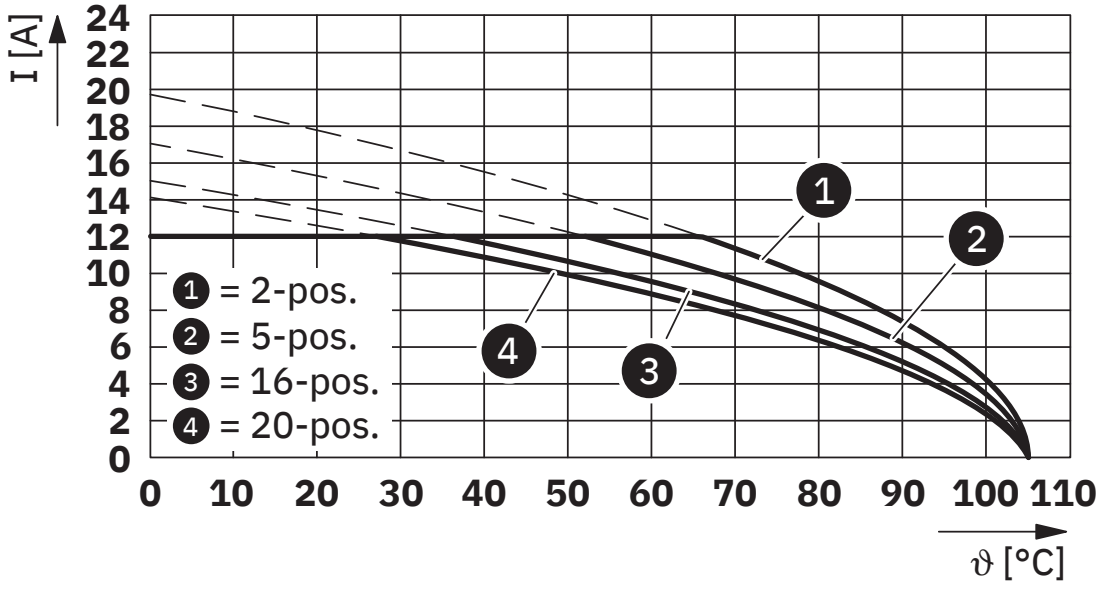

Type: MSTB 2,5/...-ST-5,08 with DFK-MSTB 2,5/...-G-5,08

Diagram




Type: MSTB 2,5/...-ST-5,08 with MSTBVK 2,5/...-G-5,08

Diagram




Type: MSTB 2,5/...-ST-5,08 with MSTBV 2,5/...-GEH-5,08

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1702951

**CSA**
Approval ID: 13631-2585951

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 15 A | 28 - 12 | - |
| D | | | | |
| | 300 V | 10 A | 28 - 12 | - |

**cULus Recognized**
Approval ID: E60425-19931011

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 15 A | 30 - 12 | - |
| D | | | | |
| | 300 V | 10 A | 30 - 12 | - |

**VDE Zeichengenehmigung**
Approval ID: 40050694

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 250 V | 12 A | - | 0.2 - 2.5 |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27460202 |
| ECLASS-15.0 | 27460202 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002638 |

### UNSPSC

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

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 0.089 kg CO2e |


Phoenix Contact 2026 © - all rights reserved
https://www.phoenixcontact.com



Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com