2022-03-16
Product version 05
Document revision 01

# Data sheet

## Item No.: 1757080

## Type: MSTB 2,5/ 9-ST-5,08

## PCB connector, Screw connection with tension sleeve

The figure shows a 10-position version of the product

## 1 Main features


- No. of pos. 9
- Conductor cross section 2.5 mm²
- Color green (6021)
- Pitch 5.08 mm
- Connection method Screw connection with tension sleeve
- Nominal current 12 A
- Nominal voltage 320 V
- Connection direction 0 °
- Type of packaging packed in cardboard

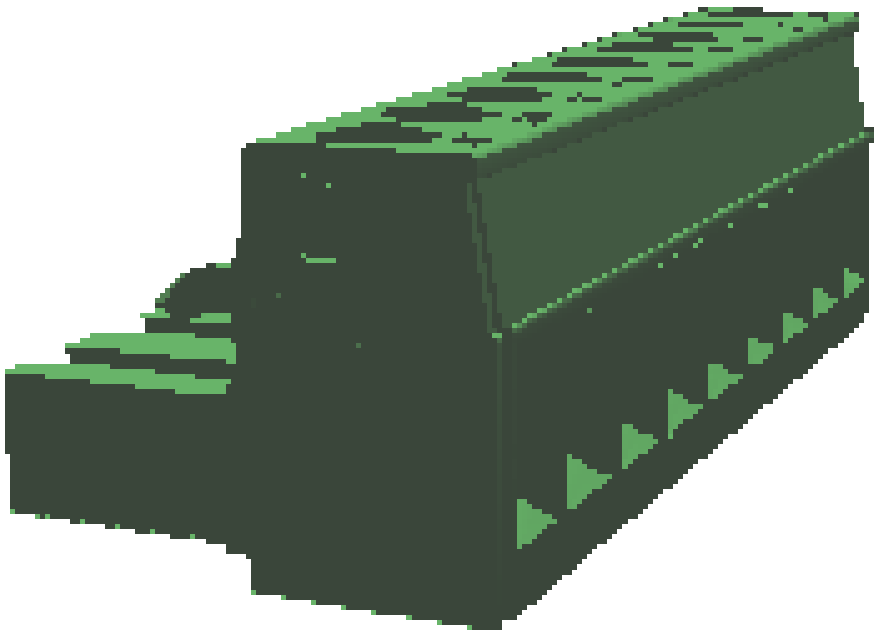
## 2 Your advantages

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

Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1757080

# 3 Table of contents

## 4 3D model in PDF can be activated (Acrobat Reader only)



# 5 General Technical Data

## 5.1 item properties

| | |
|---|---|
| Item no. | 1757080 |
| Type | MSTB 2,5/ 9-ST-5,08 |
| Product line | COMBICON Connectors M |
| Connector system | CLASSIC COMBICON |
| Product type | PCB connector |
| Type of contact | Female connector |
| Range of articles | MSTB 2,5/..-ST |
| Pitch | 5.08 mm |
| Number of positions | 9 |
| Number of rows | 1 |
| Number of connections | 9 |
| Number of potentials | 9 |
| Connection method | Screw connection with tension sleeve |
| Screw thread | M3 |
| Drive form screw head | Slotted (L) |
| Connection direction of the conductor to plug-in direction | 0 ° |
| Type | Standard |

# 6 Mounting

## 6.1 Flange mounting

| | |
|---|---|
| Type of locking | without |
| Mounting flange | without |

# 7 Conductor connection

## 7.1 Connection capacity

| | |
|---|---|
| Nominal cross section | 2.5 mm² |
| Conductor cross section, rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross section, flexible | 0.2 mm² ... 2.5 mm² |
| 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, stranded | 0.2 mm² ... 1.5 mm² |
| 2 conductors with same cross section, stranded, with ferrule without plastic sleeve | 0.25 mm² ... 1 mm² |
| 2 conductors with the same cross section flexible with TWIN ferrule and 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 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

## 7.2 Connection capacity AWG

| | |
|---|---|
| Conductor cross section AWG | 24 ... 12 |

# 8 Material properties

## 8.1 Material of metal parts

| | |
|---|---|
| Note | WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Terminal point surface | Tin (5 - 7 µm Sn) |
| Surface contact area | Tin (5 - 7 µm Sn) |
| Surface characteristics | hot-dip tin-plated |

## 8.2 Material of plastic parts

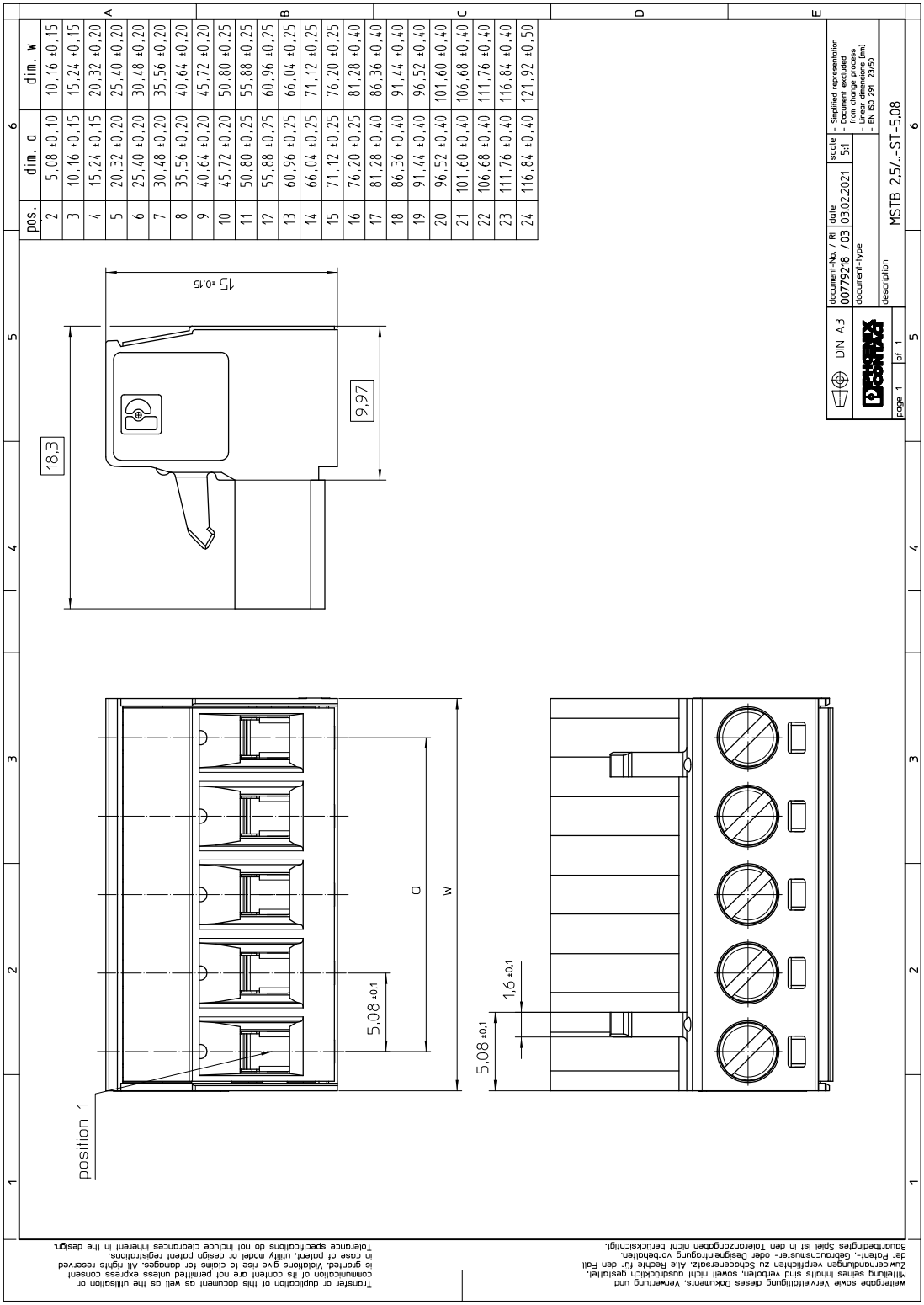
| | Housing |
|---|---|
| Color | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

# 9 Dimensions

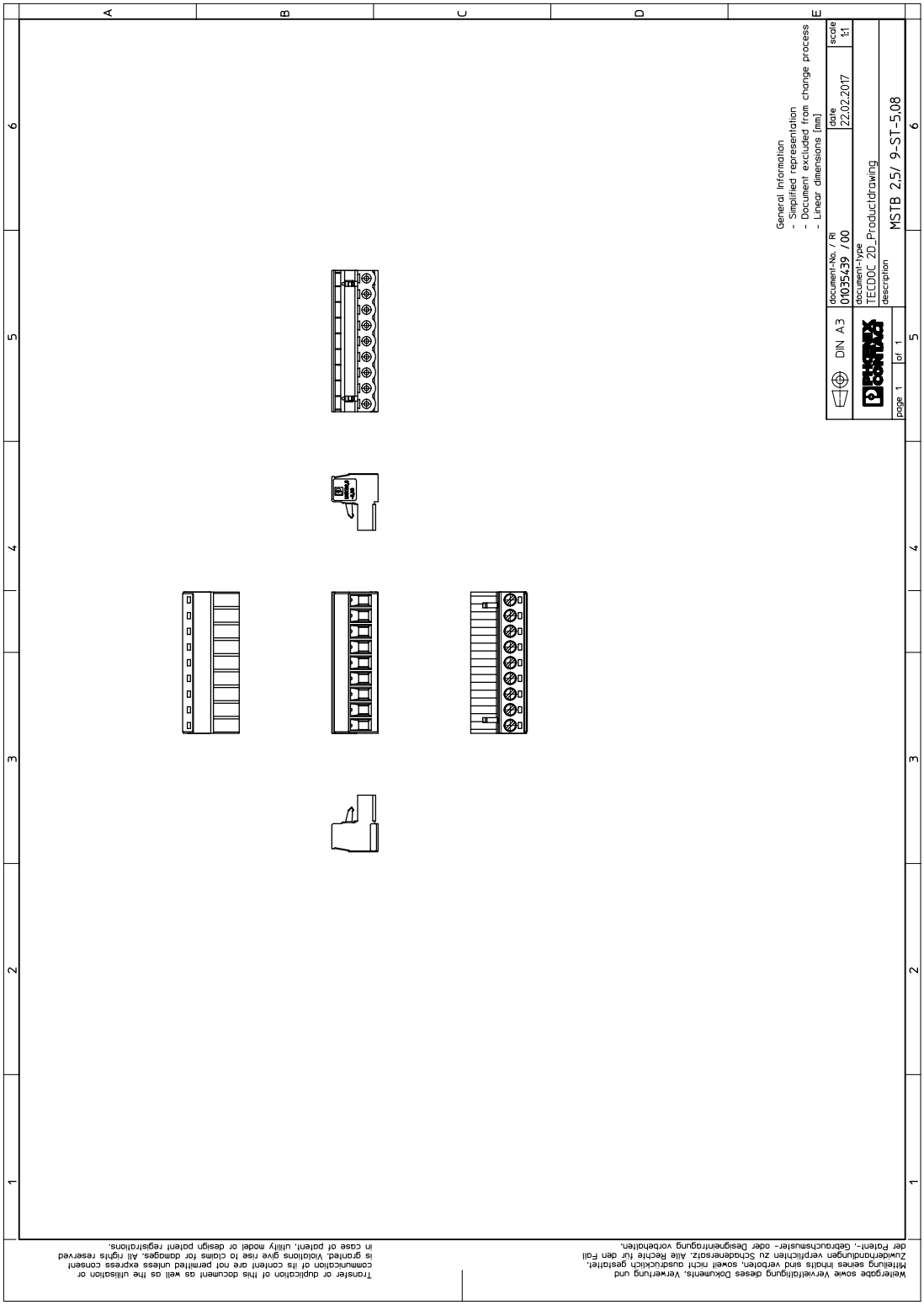
## 9.1 Dimensions for the product

| | |
|---|---|
| Length | 18.3 mm |
| Width | 45.72 mm |
| Installed height | 15 mm |
| Total height | 15 mm |

# 10 Series drawing



# 11 Product drawing



# 12 Product notes

## 12.1 General information

| | |
|---|---|
| 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. |

# 13 Packaging information

| | |
|---|---|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |

# 14 Application

## 14.1 Temperature limit values

| | |
|---|---|
| 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) |

# 15 General tests

## 15.1 Specification

| | |
|---|---|
| Specification | IEC 61984 |
| Specification | IEC 60999-1 |
| Brief description | Printed-circuit board connector |

# 16 Mechanical tests

## 16.1 Check for damage to conductor or loosening

| | |
|---|---|
| Result | Test passed |
| Specification | IEC 60999-1:1999-11 |

## 16.2 Pull-out test

| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |
| Conductor cross section/conductor type/tractive force actual value | 0.2 $mm^2$ / solid / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 0.2 $mm^2$ / flexible / > 10 N |
| Conductor cross section/conductor type/tractive force actual value | 2.5 $mm^2$ / solid / > 50 N |
| Conductor cross section/conductor type/tractive force actual value | 2.5 $mm^2$ / flexible / > 50 N |

## 16.3 Torque test

| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

## 16.4 Visual examination

| | |
|---|---|
| Specification | IEC 61984:2008-10 |
| Visual examination | Test passed |
| Specification | IEC 60512-1-1:2002-02 |

## 16.5 Dimensional test

| | |
|---|---|
| Dimensional test | Test passed |
| Specification | IEC 60512-1-2:2002-02 |

## 16.6 Resistance of marking

| | |
|---|---|
| Resistance of marking | Test passed |
| Specification | IEC 60068-2-70:1995-12 |

## 16.7 Polarization and coding

| | |
|---|---|
| Polarization when inserted<br>Requirement >20 N | Test passed |
| Specification | IEC 60512-13-5:2006-02 |

# 17 Insertion and withdrawal forces

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

## 18 Electrical tests

| | |
|---|---|
| Rated current / conductor cross section | 12 A / 2.5 mm² |
| Rated insulation voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| Contact resistance | 1.3 mΩ |
| Degree of pollution | 2 |

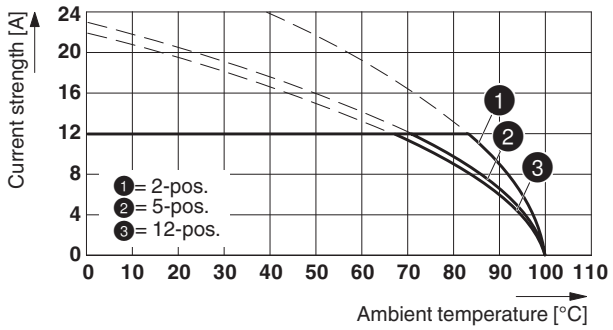
# 19 Air and creepage distances

| | | | |
|---|---|---|---|
| Component | PCB connector | | |
| Specification | IEC 60664-1:2007-04 | | |
| Mains type | unearthed mains | | |
| Insulating material group | I | | |
| Comparative tracking index (IEC 60112:2003-01) | CTI 600 | | |
| Rated insulation voltage | 250 V | 320 V | 630 V |
| Rated surge voltage | 4 kV | 4 kV | 4 kV |
| Degree of pollution | 3 | 2 | 2 |
| Overvoltage category | III | III | II |
| Minimum clearance case A (inhomogeneous field) | 3 mm | 3 mm | 3 mm |
| Minimum value of the creepage path requirement in acc. with table | 3.2 mm | 3 mm | 3.2 mm |

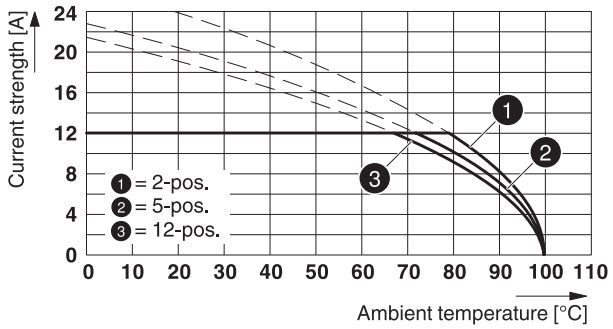
# 20 Current carrying capacity/derating curves

| | |
|---|---|
| Specification | IEC 61984:2008-10 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| Note | For number of positions, see diagram |
| Reduction factor | 0.8 |
| Conductor cross section | 2.5 mm² |

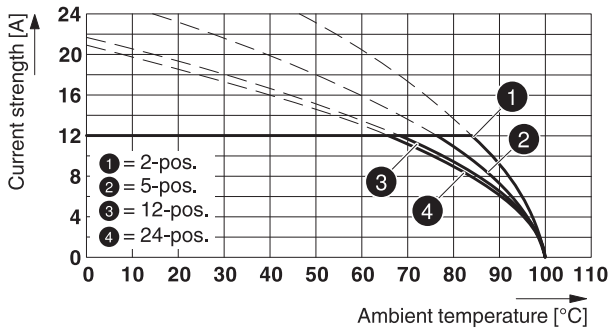
**Type: MSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR**




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

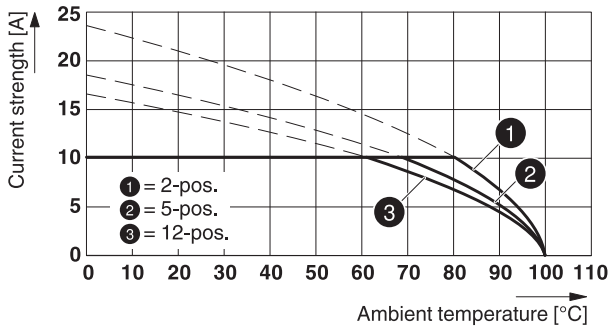



**Type: MSTB 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P26THR**

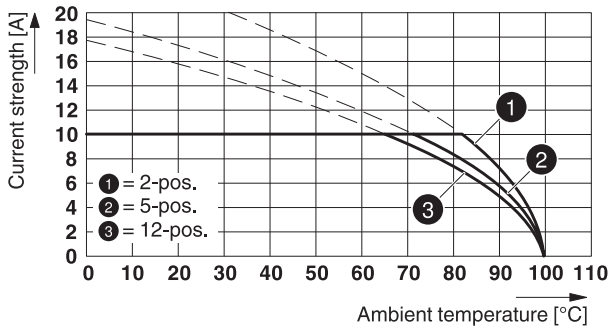


## 1757080 MSTB 2,5/ 9-ST-5,08

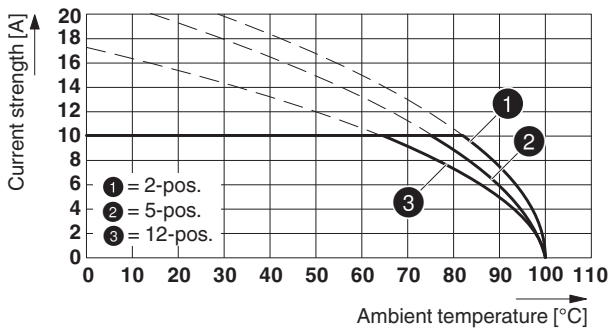
**Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G-5,08**



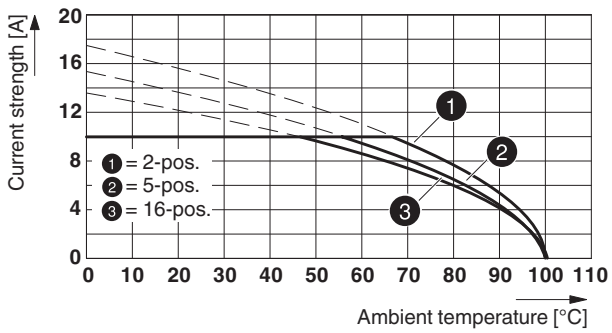

**Type: MSTB 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08**




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

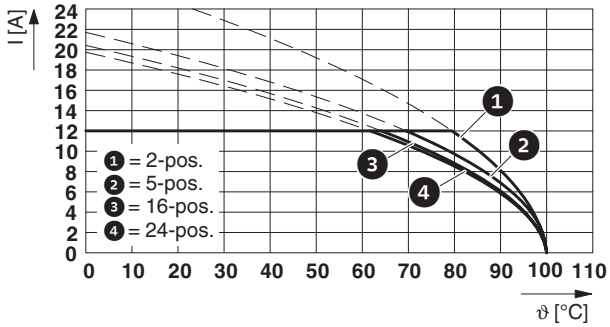



**Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G-5,08**

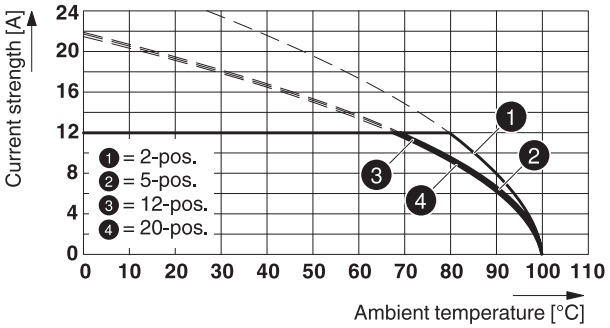


## 1757080 MSTB 2,5/ 9-ST-5,08

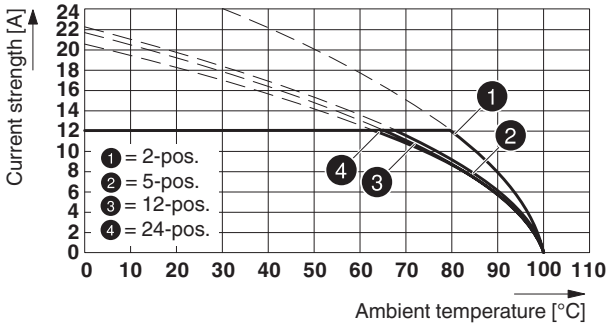
**Type: MSTB 2,5/...-ST-5,08 with SMSTB 2,5/...-G-5,08**




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

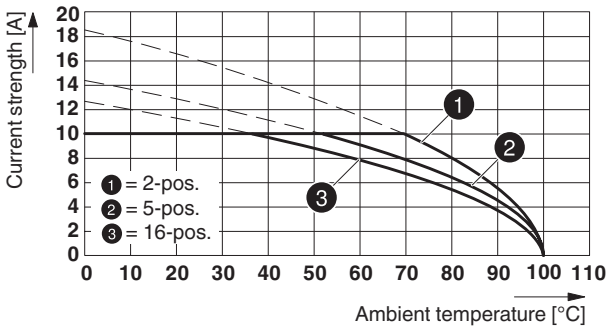



**Type: MSTB 2,5/...-ST-5,08 with MSTB 2,5/...-G-5,08**

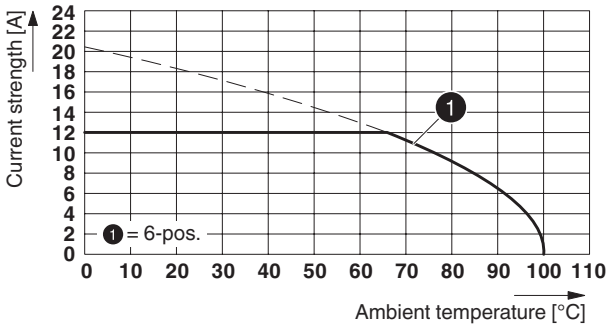


## 1757080 MSTB 2,5/ 9-ST-5,08

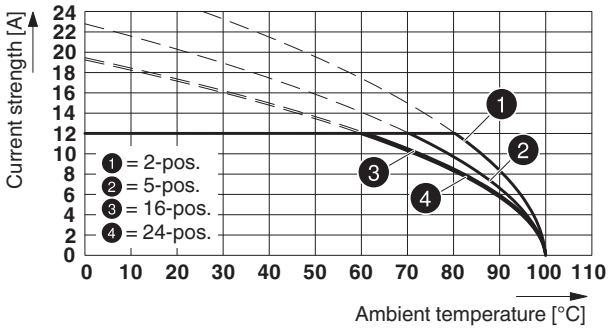
**Type: MSTB 2,5/...-ST-5,08 with MDSTBVA 2,5/...-G-5,08**




**Type: MSTB 2,5/..-ST(-5,08) with EMSTBVA 2,5/...-G(-5,08)**

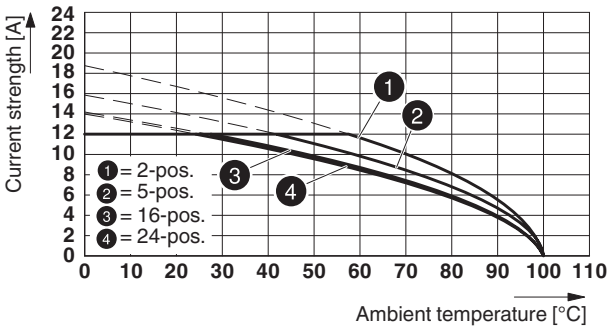



**Type: MSTB 2,5/...-ST-5,08 with MSTBW 2,5/...-G-5,08**

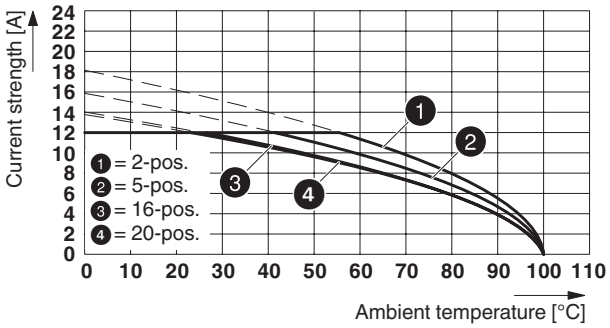


## 1757080 MSTB 2,5/ 9-ST-5,08

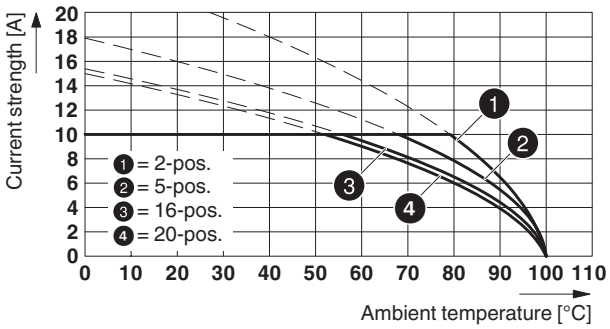
**Type: MSTB 2,5/...-ST-5,08 with MSTBVA 2,5/...-G-5,08**




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

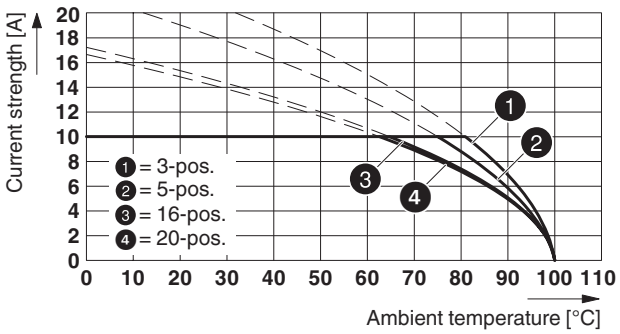



**Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G1-5,08**

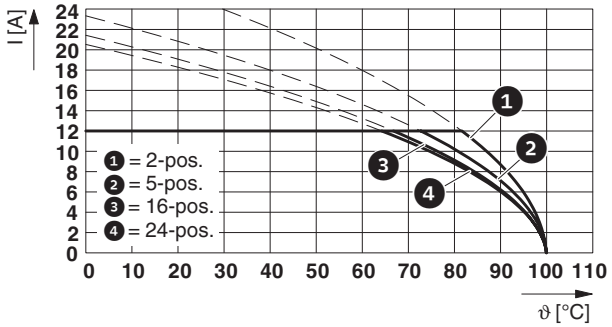


## 1757080 MSTB 2,5/ 9-ST-5,08

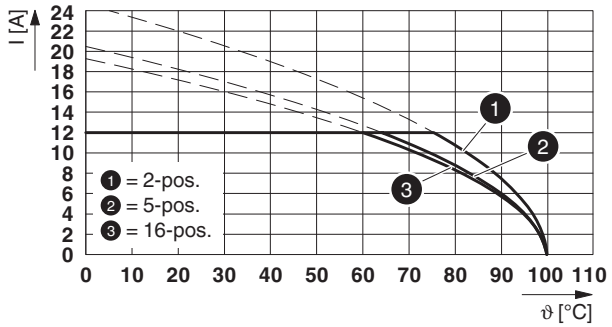
**Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G1-5,08**




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




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



# 21 Environmental and durability tests

## 21.1 Vibration test

| Specification | IEC 60068-2-6:2007-12 |
|---|---|
| Result | Test passed |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 - 60.1 Hz) |
| Acceleration | 5g (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |
| Note | The connected conductor loops were guided to the test sample at a distance of approx. 10 cm. |

## 21.2 Insulation resistance

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

## 22 Type approval and special tests

## 23 Classification for connectors

| Specification | IEC 61984:2008-10 |
|---|---|
| Main features | Connectors without switching capacity (COC) |
| Construction form | Fixed connectors |
| Strain relief elements | without strain relief |
| Connection method | Can be reconnected |
| Protection against electric shock | Not encapsulated - touch-proof when inserted |
| Protective conductor | without PE |
| Locking | no |
| Connection method | Screw terminal points |

## 24 Approvals / Certificates

| CSA | Voltage [V] | Current [A] | Cross section [AWG] | Cross section [mm²] |
|---|---|---|---|---|
| **Usegroup B** | | | | |
| | 300 V | 15 A | 28 - 12 | - |
| **Usegroup D** | | | | |
| | 300 V | 10 A | 28 - 12 | - |

| IECEE CB Scheme | Voltage [V] | Current [A] | Cross section [AWG] | Cross section [mm²] |
|---|---|---|---|---|
| | 250 V | 12 A | - | 0.2 - 2.5 |

| EAC | | | | |
|---|---|---|---|---|

| cULus Recognized | Voltage [V] | Current [A] | Cross section [AWG] | Cross section [mm²] |
|---|---|---|---|---|
| **Usegroup B** | | | | |
| | 300 V | 15 A | 30 - 12 | - |
| **Usegroup D** | | | | |
| | 300 V | 10 A | 30 - 12 | - |

| VDE Zeichengenehmigung | Voltage [V] | Current [A] | Cross section [AWG] | Cross section [mm²] |
|---|---|---|---|---|
| | 250 V | 12 A | - | 0.2 - 2.5 |

## 25 Commercial Data

| | |
|---|---|
| Item no. | 1757080 |
| Type | MSTB 2,5/ 9-ST-5,08 |
| Pieces per package | 50 |
| Net weight | 14.894 g |
| GTIN | 4017918029616 |
| | Information that applies locally, see link on page 1 |

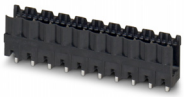
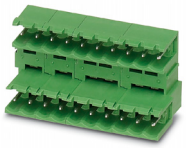
## 26 corresponding headers

| Item no. | Type |
|---|---|
| 1735811 | MSTBW 2,5/ 9-G-5,08 |
| 1755804 | MSTBVA 2,5/ 9-G-5,08 |
| 1955921 | CCVA 2,5/ 9-G-5,08 P26THR |
| 1956030 | CCVA 2,5/ 9-G-5,08 P26THRR88 |

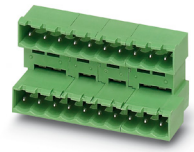
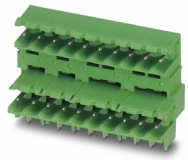
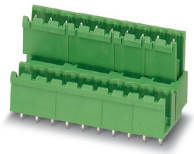
## 27 Accessories

| Description | Item No. | **Type** |
|---|---|---|
| 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 | 1205053 | SZS 0,6X3,5 |
| | 0804293 | SK 5,08/3,8:FORTL.ZAHLEN |
| | 1783782 | KGS-MSTB 2,5/ 9 |
| Coding profile, is inserted into the slot on the plug or inverted header, red insulating material | 1734634 | CP-MSTB |
| | 0803883 | SK U/2,8 WH:UNBEDRUCKT |

## 28 Combination tests

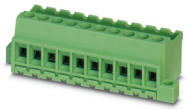
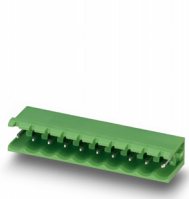
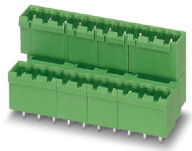
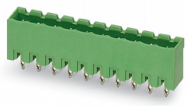
| |  |  |  |  |  |
|---|---|---|---|---|---|
| | **MSTB 2,5/..-ST** | **CC 2,5/..-G** | **CCV 2,5/..-G** | **CCVA 2,5/..-G** | **MDSTB 2,5/..-G** |
| | IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 |
| Mechanical tests (A) | | | | | |
| Insertion/withdrawal force per position | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N |
| Polarization when inserted<br>Requirement >20 N | Test passed | Test passed | Test passed | Test passed | |
| Contact holder in insert<br>Requirements >20 N | Test passed | Test passed | Test passed | Test passed | |
| Durability tests (B) | | | | | |
| Contact resistance $R_1$ 1st level | 1.3 mΩ | 1.2 mΩ | 1.3 mΩ | 1.3 mΩ | |
| Contact resistance $R_1$ 2nd level | | | | 1.6 mΩ | |
| Insertion/withdrawal cycles | 25 | 25 | 25 | 25 | |
| Contact resistance $R_2$ | 1.4 mΩ | 1.2 mΩ | 1.4 mΩ | 1.3 mΩ | |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV | |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV | |
| Insulation resistance<br>Requirements > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ | |
| Thermal tests (C) | | | | | |
| Tested number of positions | 12 | 12 | 24 | 12 | |
| Tested conductor cross section | 2.5 mm² | 2.5 mm² | 2.5 mm² | 2.5 mm² | |
| Test current | 12 A | 12 A | 12 A DC | 10 A | |
| Upper limiting temperature<br>Requirements < 100°C | Test passed | Test passed | Test passed | Test passed | |
| Climatic tests (D) | | | | | |
| Test sequence 1: low temperature storage | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h | |
| Test sequence 2: heat storage | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h | |
| Test sequence 3: noxious gas storage (ISO 6988) | 0.2 dm³ $SO_2$ on 300 dm³/ 40 °C/1 cycle | 0.2 dm³ $SO_2$ on 300 dm³/ 40 °C/1 cycle | 0.2 dm³ $SO_2$ on 300 dm³/ 40 °C/1 cycle | 0.2 dm³ $SO_2$ on 300 dm³/ 40 °C/1 cycle | |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV | |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV | |
| Environmental and endurance tests (E) | | | | | |
| Specification | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 | |
| Degree of protection | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger | |

## 1757080 MSTB 2,5/ 9-ST-5,08


| MSTB 2,5/..-ST | MDSTBA 2,5/..-G | MDSTBW 2,5/..-G | MDSTBV 2,5/..-G | SMSTB 2,5/..-G |
|---|---|---|---|---|
| IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 |
| **Mechanical tests (A)** | | | | |
| Insertion/withdrawal force per position | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N |
| Polarization when inserted<br>Requirement >20 N | Test passed | Test passed | Test passed | Test passed |
| Contact holder in insert<br>Requirements >20 N | Test passed | Test passed | Test passed | Test passed |
| **Durability tests (B)** | | | | |
| Contact resistance $R_1$ 1st level | 1.3 mΩ | 1.3 mΩ | 2.6 mΩ | 1.3 mΩ |
| Contact resistance $R_1$ 2nd level | 1.6 mΩ | 1.6 mΩ | 1.6 mΩ | |
| Insertion/withdrawal cycles | 25 | 25 | 25 | 25 |
| Contact resistance $R_2$ | 1.3 mΩ | 1.3 mΩ | 2.6 mΩ | 1.3 mΩ |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV |
| Insulation resistance<br>Requirements > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ |
| **Thermal tests (C)** | | | | |
| Tested number of positions | 12 | 12 | 12 | 24 |
| Tested conductor cross section | 2.5 mm² | 2.5 mm² | 2.5 mm² | 2.5 mm² |
| Test current | 10 A | 10 A | 10 A | 12 A |
| Upper limiting temperature<br>Requirements < 100°C | Test passed | Test passed | Test passed | Test passed |
| **Climatic tests (D)** | | | | |
| Test sequence 1: low temperature storage | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h |
| Test sequence 2: heat storage | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h |
| Test sequence 3: noxious gas storage (ISO 6988) | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV |
| **Environmental and endurance tests (E)** | | | | |
| Specification | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 |
| Degree of protection | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger |

## 1757080 MSTB 2,5/ 9-ST-5,08

| MSTB 2,5/..-ST | MVSTBU 2,5/..-GB | MSTB 2,5/..-G | MDSTBVA 2,5/..-G | EMSTBVA 2,5/..-G |
|---|---|---|---|---|
| IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 | DIN VDE 0627 (in parts) |
| **Mechanical tests (A)** | | | | |
| Insertion/withdrawal force per position | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 5 N / 4 N |
| Polarization when inserted<br>Requirement >20 N | Test passed | Test passed | Test passed | |
| Contact holder in insert<br>Requirements >20 N | Test passed | Test passed | Test passed | |
| **Durability tests (B)** | | | | |
| Contact resistance $R_1$ 1st level | 1.9 mΩ | 1.4 mΩ | 2.5 mΩ | 1.1 mΩ |
| Contact resistance $R_1$ 2nd level | | | 1.5 mΩ | |
| Insertion/withdrawal cycles | 25 | 25 | 25 | 25 |
| Contact resistance $R_2$ | 2.2 mΩ | 1.4 mΩ | 2.5 mΩ | 1.5 mΩ |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV |
| Insulation resistance<br>Requirements > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ | $10^{12}$ Ω |
| **Thermal tests (C)** | | | | |
| Tested number of positions | 20 | 24 | 16 | 6 |
| Tested conductor cross section | 2.5 mm² | 2.5 mm² | 2.5 mm² | 2.5 mm² |
| Test current | 12 A | 12 A | 10 A | 12 A |
| Upper limiting temperature<br>Requirements < 100°C | Test passed | Test passed | Test passed | |
| **Climatic tests (D)** | | | | |
| Test sequence 1: low temperature storage | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h |
| Test sequence 2: heat storage | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h |
| Test sequence 3: noxious gas storage (ISO 6988) | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV |
| **Environmental and endurance tests (E)** | | | | |
| Specification | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 |
| Degree of protection | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger |

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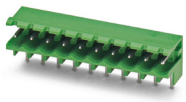
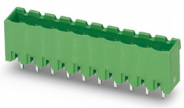
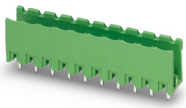
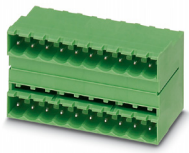
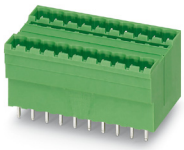





| MSTB 2,5/..-ST | MSTBW 2,5/..-G | MSTBVA 2,5/..-G | MSTBV 2,5/..-G | MDSTB 2,5/..-G1 |
|---|---|---|---|---|
| IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 |
| **Mechanical tests (A)** | | | | |
| Insertion/withdrawal force per position | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N |
| Polarization when inserted<br>Requirement >20 N | Test passed | Test passed | Test passed | Test passed |
| Contact holder in insert<br>Requirements >20 N | Test passed | Test passed | Test passed | Test passed |
| **Durability tests (B)** | | | | |
| Contact resistance $R_1$ 1st level | 1.3 mΩ | 2.4 mΩ | 2.4 mΩ | 1.2 mΩ |
| Contact resistance $R_1$ 2nd level | | | | 2 mΩ |
| Insertion/withdrawal cycles | 25 | 25 | 25 | 25 |
| Contact resistance $R_2$ | 1.3 mΩ | 2.5 mΩ | 2.4 mΩ | 1.2 mΩ |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV |
| Insulation resistance<br>Requirements > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ |
| **Thermal tests (C)** | | | | |
| Tested number of positions | 20 | 24 | 20 | 20 |
| Tested conductor cross section | 2.5 mm² | 2.5 mm² | 2.5 mm² | 2.5 mm² |
| Test current | 12 A | 12 A | 12 A | 10 A |
| Upper limiting temperature<br>Requirements < 100°C | Test passed | Test passed | Test passed | Test passed |
| **Climatic tests (D)** | | | | |
| Test sequence 1: low temperature storage | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h |
| Test sequence 2: heat storage | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h |
| Test sequence 3: noxious gas storage (ISO 6988) | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | 4.8 kV |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | 2.21 kV |
| **Environmental and endurance tests (E)** | | | | |
| Specification | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 |
| Degree of protection | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger |

# 1757080 MSTB 2,5/ 9-ST-5,08



| MSTB 2,5/..-ST | MDSTBV 2,5/..-G1 | SMSTBA 2,5/..-G | DFK-MSTBA 2,5/ ..-G | |
|---|---|---|---|---|
| IEC 61984 | IEC 61984 | IEC 61984 | IEC 61984 | |
| **Mechanical tests (A)** | | | | |
| Insertion/withdrawal force per position | approx. 8 N / 6 N | approx. 8 N / 6 N | approx. 8 N / 6 N | |
| Polarization when inserted<br>Requirement >20 N | Test passed | Test passed | Test passed | |
| Contact holder in insert<br>Requirements >20 N | Test passed | Test passed | Test passed | |
| **Durability tests (B)** | | | | |
| Contact resistance $R_1$ 1st level | 1.4 mΩ | 1.3 mΩ | 1.4 mΩ | |
| Contact resistance $R_1$ 2nd level | 1.4 mΩ | | | |
| Insertion/withdrawal cycles | 25 | 25 | 25 | |
| Contact resistance $R_2$ | 1.4 mΩ | 1.3 mΩ | 1.4 mΩ | |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | |
| Insulation resistance<br>Requirements > 5 MΩ | > 5 MΩ | > 5 MΩ | > 5 MΩ | |
| **Thermal tests (C)** | | | | |
| Tested number of positions | 20 | 24 | 16 | |
| Tested conductor cross section | 2.5 mm² | 2.5 mm² | 2.5 mm² | |
| Test current | 10 A | 12 A | 12 A | |
| Upper limiting temperature<br>Requirements < 100°C | Test passed | Test passed | Test passed | |
| **Climatic tests (D)** | | | | |
| Test sequence 1: low temperature storage | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h | |
| Test sequence 2: heat storage | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h | |
| Test sequence 3: noxious gas storage (ISO 6988) | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | 0.2 $dm^3$ $SO_2$ on 300 $dm^3$/ 40 °C/1 cycle | |
| Rated impulse voltage at sea level<br>Voltage waveform ≥ (1.2/50 µs) | 4.8 kV | 4.8 kV | 4.8 kV | |
| Power-frequency withstand voltage<br>Voltage waveform ≥ (50/60 Hz) | 2.21 kV | 2.21 kV | 2.21 kV | |
| **Environmental and endurance tests (E)** | | | | |
| Specification | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 | |
| Degree of protection | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger | |