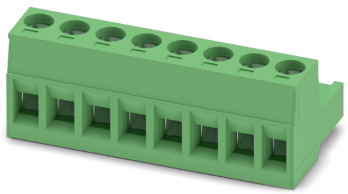
2023-07-04
Product version 05
Document revision 02

Data sheet

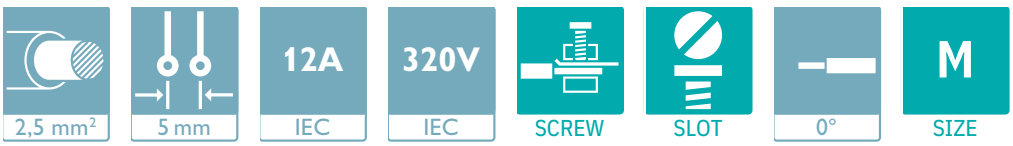
Item No.: 1754562

Type: MSTB 2,5/ 8-ST

PCB connector, Screw connection with tension sleeve



1 Main features



- No. of pos. 8
- Conductor cross section 2.5 mm²
- Color green (RAL 6021)
- Pitch 5 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

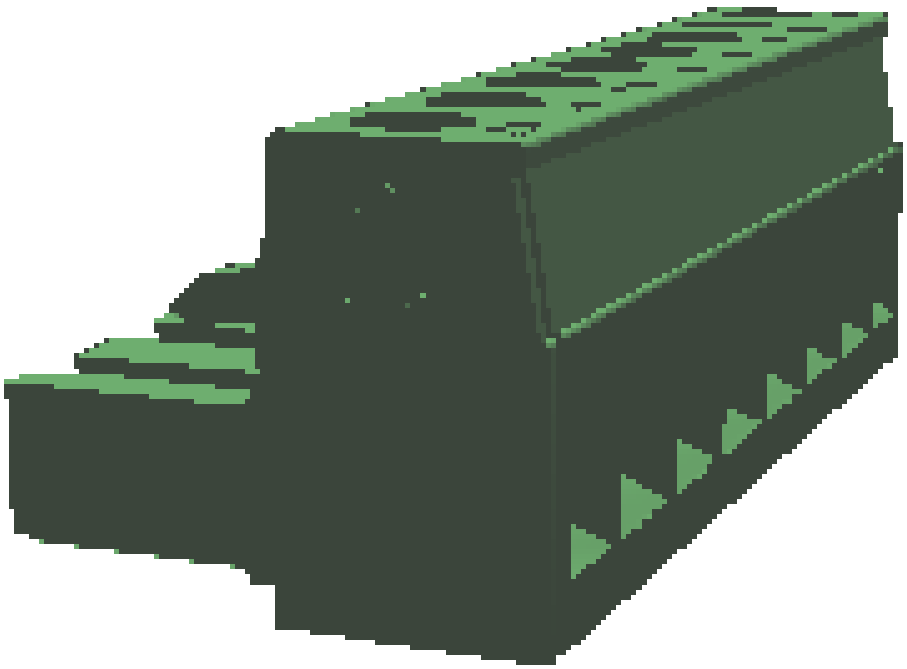
2 Your advantages

- 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.com/product/1754562

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.	1754562
Type	MSTB 2,5/ 8-ST
Product line	COMBICON Connectors M
Connector system	COMBICON MSTB 2,5
Product type	PCB connector
Type of contact	Socket
Range of articles	MSTB 2,5/..-ST
Pitch	5 mm
Number of positions	8
Number of rows	1
Number of connections	8
Number of potentials	8
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

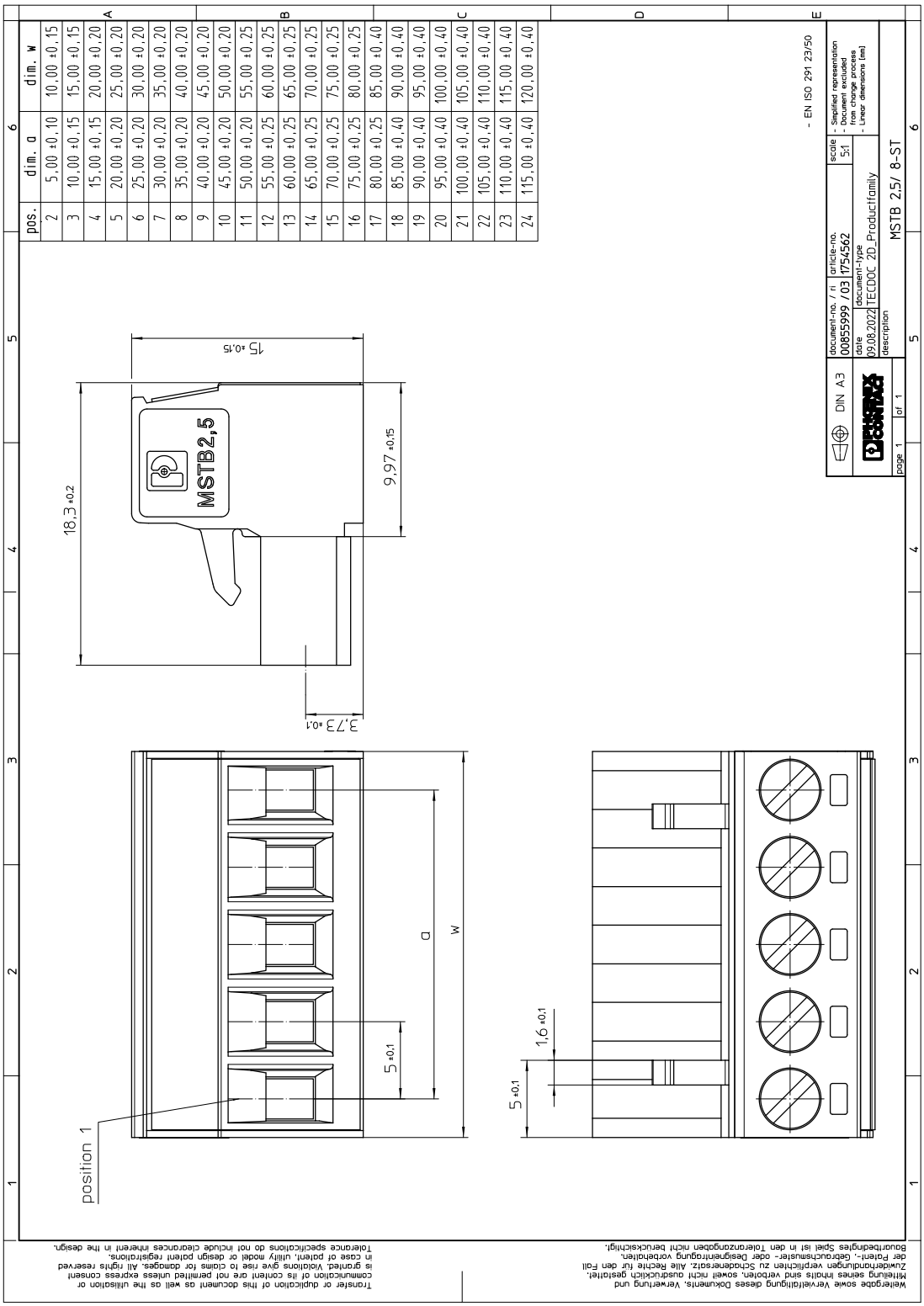
	Housing
Color	green (RAL 6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for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

9 Dimensions

9.1 Dimensions for the product

Length	18.2 mm
Width	40 mm
Total height	15 mm

10 Series drawing



11 Product notes

11.1 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.

12 Packaging specifications

Type of packaging	packed in cardboard
Packing unit	50

13 Application

13.1 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)

14 General tests

14.1 Specification

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

15 Mechanical tests

15.1 Check for damage to conductor or loosening

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

15.2 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

15.3 Torque test

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

15.4 Visual examination

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

15.5 Dimensional test

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

15.6 Resistance of marking

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

15.7 Polarization and coding

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

16 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

17 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	1.4 mΩ
Degree of pollution	2

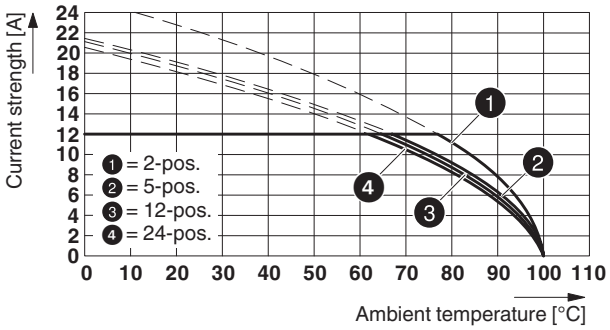
18 Air and creepage distances

Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112)	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

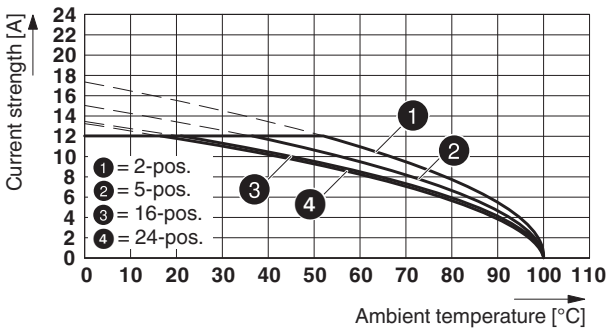
19 Current carrying capacity/derating curves

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

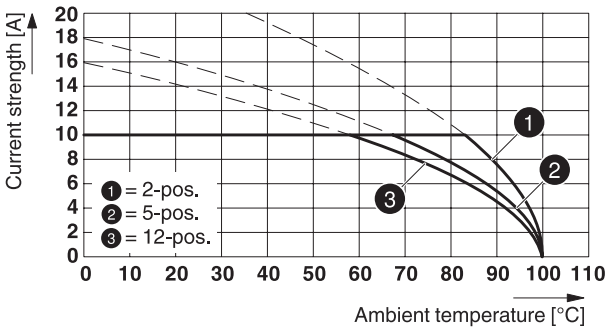
Type: MSTB 2,5/...-ST with MSTBA 2,5/...-G



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

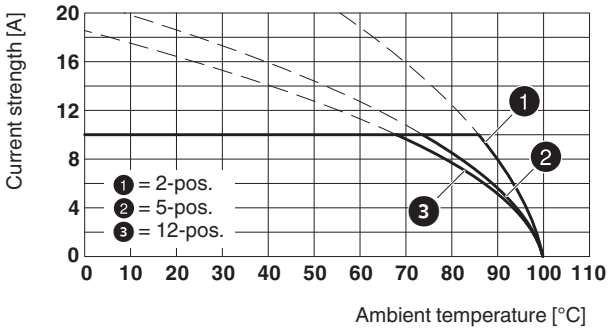


Type: MSTB 2,5/..-ST with MDSTB 2,5/...-G

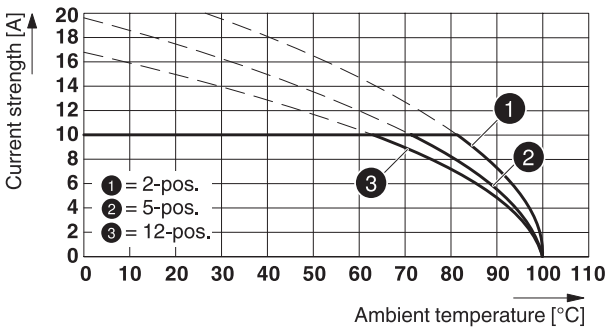


1754562 MSTB 2,5/ 8-ST

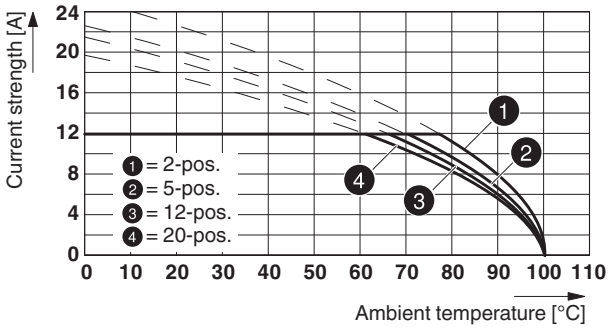
Type: MSTB 2,5/..-ST with MDSTBV 2,5/...-G



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

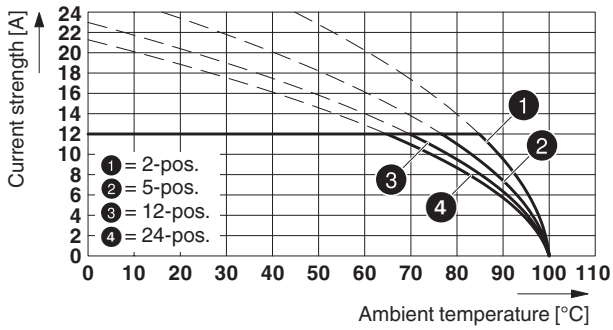


Type: MSTB 2,5/...-ST with MSTBW 2,5/...-G

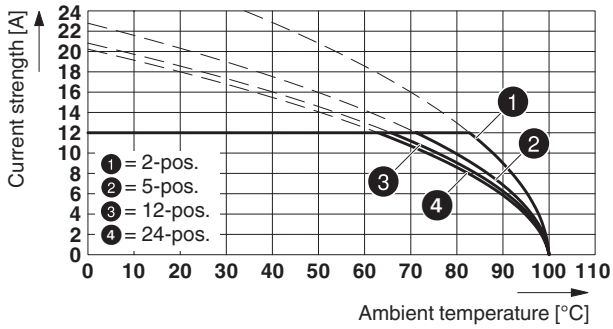


1754562 MSTB 2,5/ 8-ST

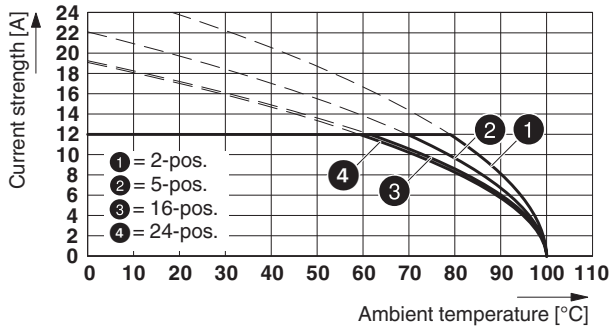
Type: MSTB 2,5/...-ST with CCA 2,5/...-G P20 THR



Type: MSTB 2,5/...-ST with CCVA 2,5/...-G P20 THR

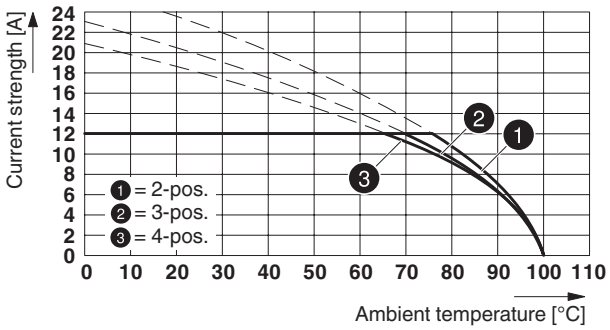


Type: MSTB 2,5/...-ST with SMSTBA 2,5/...-G

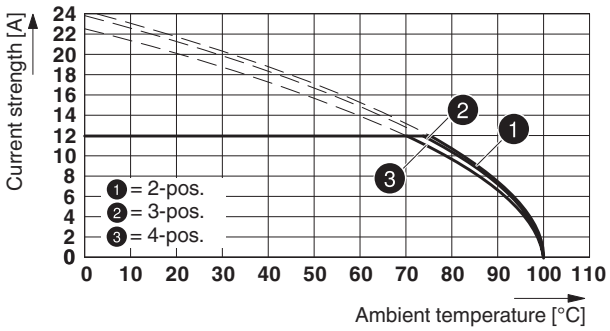


1754562 MSTB 2,5/ 8-ST

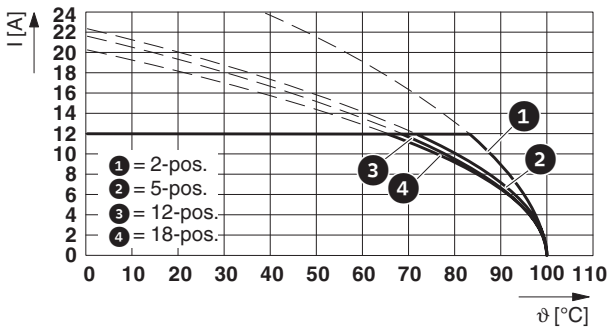
Type: MSTB 2,5/..-ST with MSTBO 2,5/...-G1L



Type: MSTB 2,5/..-ST with MSTBO 2,5/...-G1R

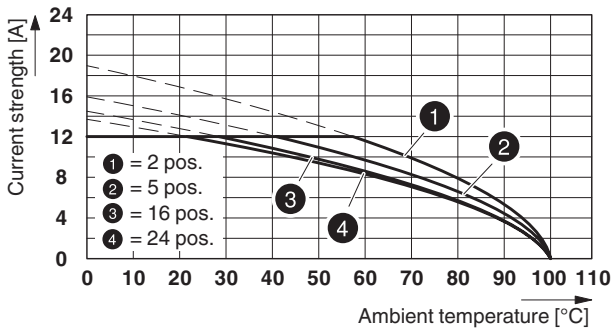


Type: MSTB 2,5/...-ST with FKIC 2,5/...-ST

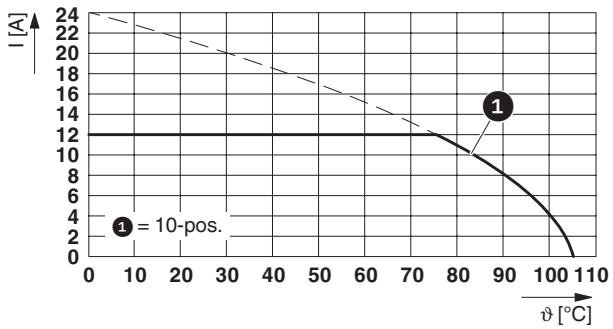


1754562 MSTB 2,5/ 8-ST

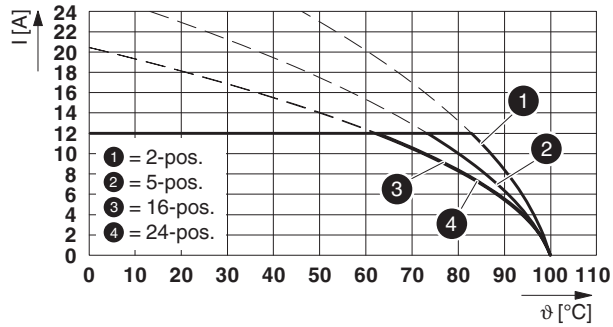
Type: MSTB 2,5/...-ST with MSTBV 2,5/...-G



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

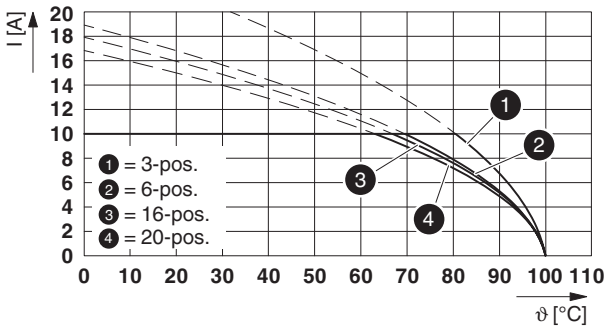


Type: MSTB 2,5/...-ST with MSTB 2,5/...-G

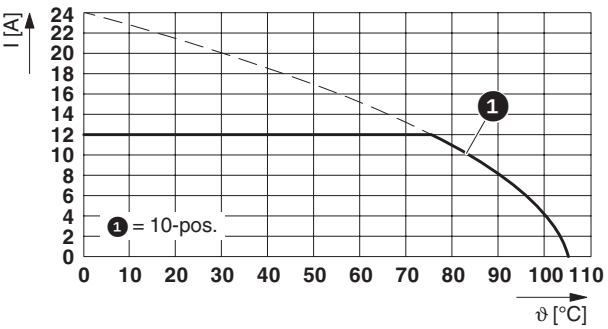


1754562 MSTB 2,5/ 8-ST

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



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



20 Environmental and durability tests

20.1 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 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
Note	The connected conductor loops were guided to the test sample at a distance of approx. 10 cm.

20.2 Insulation resistance

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

21 Type approval and special tests

22 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

23 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

24 Commercial Data

Item no.	1754562
Type	MSTB 2,5/ 8-ST
Packing unit	50
Net weight	13.022 g
GTIN	4017918028732
	Information that applies locally, see link on page 1

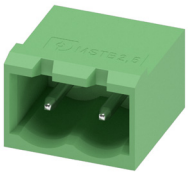
25 corresponding headers

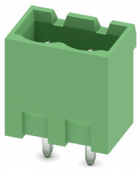
Item no.	Type
1736056	MSTBW 2,5/ 8-G
1753550	MSTBV 2,5/ 8-G

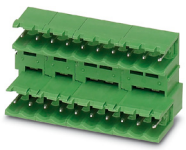
26 Accessories

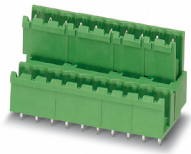
Description	Item No.	**Type**
Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip	1205053	SZS 0,6X3,5
	0804183	SK 5/3,8:FORTL.ZAHLEN
	1803921	KGG-MSTB 2,5/ 8
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB
	1783779	KGS-MSTB 2,5/ 8

27 Combination tests



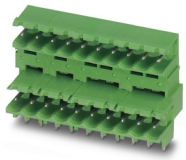
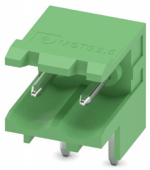


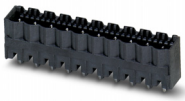




MSTB 2,5/..-ST	MSTBA 2,5/..-G	MSTBVA 2,5/..-G	MDSTB 2,5/..-G	MDSTBV 2,5/..-G
IEC 61984	IEC 61984	IEC 61984	IEC 61984	IEC 61984
Mechanical tests (A)				
Insertion/withdrawal force per position	approx. 8 N / 6 N	approx. 8 N / 6 N	approx. 8 N / 6 N	approx. 8 N / 6 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed	Test passed
Durability tests (B)				
Contact resistance R_1 1st level	1.4 mΩ	2.5 mΩ	1.4 mΩ	2.5 mΩ
Contact resistance R_1 2nd level			1.8 mΩ	1.5 mΩ
Insertion/withdrawal cycles	25	25	25	25
Contact resistance R_2	1.5 mΩ	2.5 mΩ	1.5 mΩ	2.6 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV	2.21 kV	2.21 kV	2.21 kV
Insulation resistance Requirements > 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ
Thermal tests (C)				
Tested number of positions	24	24	12	12
Tested conductor cross section	2.5 mm²	2.5 mm²	2.5 mm²	2.5 mm²
Test current	12 A	12 A	10 A	10 A
Upper limiting temperature 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
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed	Test passed
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 Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage 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

1754562 MSTB 2,5/ 8-ST



MSTB 2,5/..-ST	MDSTBW 2,5/..-G	MSTBW 2,5/..-G	CCA 2,5/..-G	CCVA 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 / 7 N	approx. 8 N / 6 N	approx. 8 N / 6 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed	Test passed
Durability tests (B)				
Contact resistance R_1 1st level	1.4 mΩ	1.4 mΩ	1.1 mΩ	1.2 mΩ
Contact resistance R_1 2nd level	1.7 mΩ			
Insertion/withdrawal cycles	25	25	25	25
Contact resistance R_2	1.5 mΩ	1.5 mΩ	1.2 mΩ	1.2 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV	2.21 kV	2.21 kV	2.21 kV
Insulation resistance Requirements > 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ
Thermal tests (C)				
Tested number of positions	12	20	24	24
Tested conductor cross section	2.5 mm²	2.5 mm²	2.5 mm²	2.5 mm²
Test current	10 A	12 A DC	12 A	12 A
Upper limiting temperature 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 Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage 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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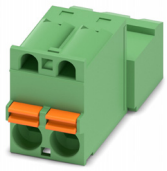

MSTB 2,5/..-ST	SMSTBA 2,5/..-G	MSTBO 2,5/..-G1L	MSTBO 2,5/..-G1R	FKIC 2,5/..-ST
IEC 61984	IEC 61984	IEC 61984	IEC 61984	IEC 61984
Mechanical tests (A)				
Insertion/withdrawal force per position	approx. 8 N / 6 N	approx. 8 N / 6 N	approx. 8 N / 6 N	approx. 8 N / 6 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed	Test passed
Durability tests (B)				
Contact resistance R_1 1st level	1.3 mΩ	1.5 mΩ	1.6 mΩ	1.6 mΩ
Contact resistance R_1 2nd level				
Insertion/withdrawal cycles	25	25	25	25
Contact resistance R_2	1.4 mΩ	1.5 mΩ	1.6 mΩ	1.6 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV	2.21 kV	2.21 kV	2.21 kV
Insulation resistance Requirements > 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ
Thermal tests (C)				
Tested number of positions	24	4	4	18
Tested conductor cross section	2.5 mm²	2.5 mm²	2.5 mm²	2.5 mm²
Test current	12 A	12 A	12 A	12 A
Upper limiting temperature 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 Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage 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	No contact safety (IP00) in acc. with IEC 60529:1989-11 + AMD 1:1999-11 + AMD 2:2013-08	No contact safety (IP00) in acc. with IEC 60529:1989-11 + AMD 1:1999-11 + AMD 2:2013-08	Finger safety with IP20 test finger

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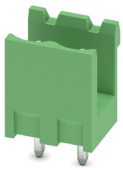

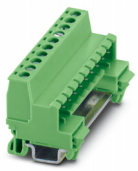

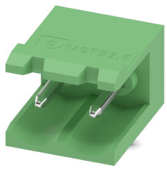

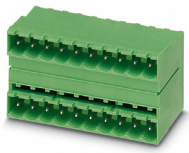

MSTB 2,5/..-ST	MSTBV 2,5/..-G	MSTBHK 2,5/..-G	MSTB 2,5/..-G	MDSTB 2,5/..-G1
IEC 61984	IEC 61984	IEC 61984	IEC 61984	IEC 61984
Mechanical tests (A)				
Insertion/withdrawal force per position	approx. 8 N / 6 N	approx. 7 N / 5 N	approx. 8 N / 6 N	approx. 8 N / 6 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed	Test passed
Durability tests (B)				
Contact resistance R_1 1st level	2.5 mΩ	1.7 mΩ	1.4 mΩ	1.3 mΩ
Contact resistance R_1 2nd level				2.2 mΩ
Insertion/withdrawal cycles	25	25	25	25
Contact resistance R_2	2.6 mΩ	1.6 mΩ	1.5 mΩ	1.4 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV	2.21 kV	2.21 kV	2.21 kV
Insulation resistance Requirements > 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ
Thermal tests (C)				
Tested number of positions	24	10	24	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 Requirements < 100°C	Test passed	Test passed	Test passed	Test passed
Upper limiting temperature 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	105 °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 Voltage waveform ≥ (1.2/50 µs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage 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	UMSTBHK 2,5/..-G			
IEC 61984	IEC 61984			
Mechanical tests (A)				
Insertion/withdrawal force per position	approx. 7 N / 5 N			
Polarization when inserted Requirement >20 N	Test passed			
Contact holder in insert Requirements >20 N	Test passed			
Durability tests (B)				
Contact resistance R_1 1st level	1.7 mΩ			
Contact resistance R_1 2nd level				
Insertion/withdrawal cycles	25			
Contact resistance R_2	1.6 mΩ			
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV			
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV			
Insulation resistance Requirements > 5 MΩ	> 5 MΩ			
Thermal tests (C)				
Tested number of positions	10			
Tested conductor cross section	2.5 mm^2			
Test current	12 A			
Upper limiting temperature Requirements < 100°C	Test passed			
Climatic tests (D)				
Test sequence 1: low temperature storage	-40 °C/2 h			
Test sequence 2: heat storage	105 °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			
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV			
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV			
Environmental and endurance tests (E)				
Specification	IEC 61984:2008-10			
Degree of protection	Finger safety with IP20 test finger			