

Data sheet

Item No.: 1757093

Type: MSTB 2,5/10-ST-5,08

PCB connector, Screw connection with tension sleeve



1 Main features



- | | | | |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos. | 10 | • Nominal current | 12 A |
| • Conductor cross section | 2.5 mm ² | • Nominal voltage | 320 V |
| • Color | green (6021) | • Connection direction | 0 ° |
| • Pitch | 5.08 mm | • Type of packaging | packed in cardboard |
| • Connection method | Screw connection with tension sleeve | | |

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.

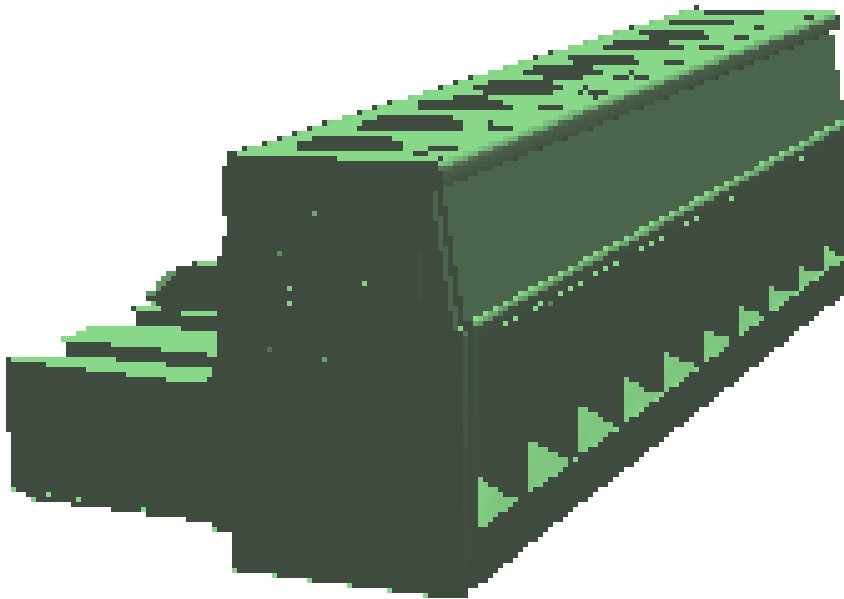
It can be downloaded at: phoenixcontact.net/product/1757093

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1757093 MSTB 2,5/10-ST-5,08

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



1757093 MSTB 2,5/10-ST-5,08**5 General Technical Data****5.1 item properties**

Item no.	1757093
Type	MSTB 2,5/10-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	10
Number of rows	1
Number of connections	10
Number of potentials	10
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

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6 Mounting

6.1 Flange mounting

Type of locking	without
Mounting flange	without

1757093 MSTB 2,5/10-ST-5,08**7 Conductor connection****7.1 Connection capacity**

Nominal cross section	2.5 mm ²
Conductor cross section, rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 2.5 mm ²
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 mm ²
2 conductors with same cross section, stranded	0.2 mm ² ... 1.5 mm ²
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm ² ... 1 mm ²
2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve	0.5 mm ² ... 1.5 mm ²
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
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1757093 MSTB 2,5/10-ST-5,08**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

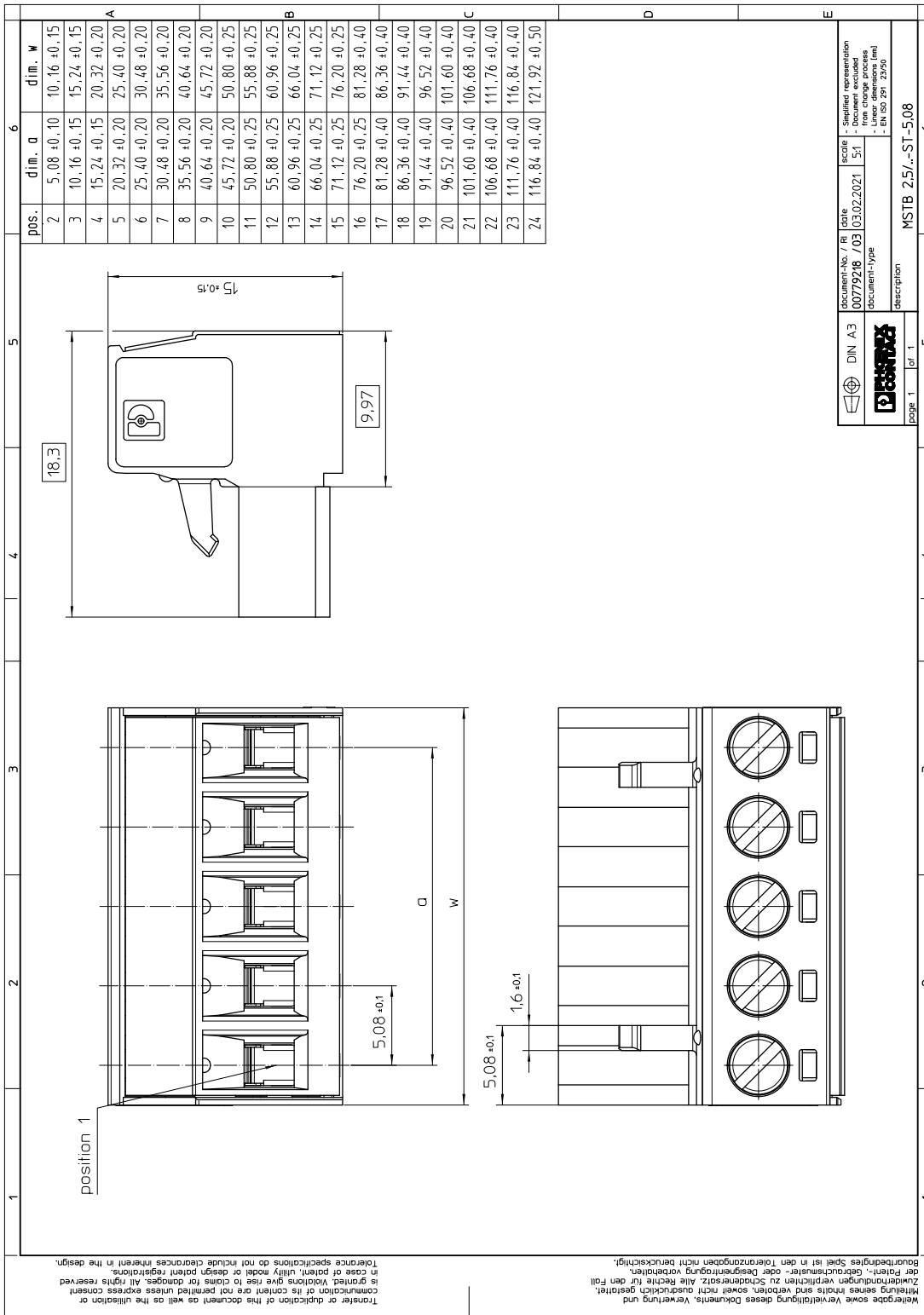
	Housing
Color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the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

1757093 MSTB 2,5/10-ST-5,08**9 Dimensions****9.1 Dimensions for the product**

Length		18.3 mm
Width		50.8 mm
Installed height		15 mm
Total height		15 mm

1757093 MSTB 2,5/10-ST-5,08

10 Series drawing



1757093 MSTB 2,5/10-ST-5,08

11 Product drawing

1	2	3	4	5	6												
A	B	C	D	E													
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<p>General Information - Simplified representation - Document excluded from change process - Linear dimensions (mm)</p> <table border="1"> <tr> <td>document-No. / RI</td> <td>date</td> <td>scale</td> </tr> <tr> <td>01035440 / 700</td> <td>22.02.2017</td> <td>1:1</td> </tr> <tr> <td>document-type</td> <td colspan="2">description</td> </tr> <tr> <td>TECDOC 2D_Productdrawing</td> <td colspan="2">MSTB 2,5/10-ST-5,08</td> </tr> </table> <p>DIN A3 page 1 of 1</p>						document-No. / RI	date	scale	01035440 / 700	22.02.2017	1:1	document-type	description		TECDOC 2D_Productdrawing	MSTB 2,5/10-ST-5,08	
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TECDOC 2D_Productdrawing	MSTB 2,5/10-ST-5,08																

1757093 MSTB 2,5/10-ST-5,08**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)

1757093 MSTB 2,5/10-ST-5,08**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

1757093 MSTB 2,5/10-ST-5,08

Polarization when inserted
Requirement >20 N

Test passed

Specification

IEC 60512-13-5:2006-02

1757093 MSTB 2,5/10-ST-5,08**17 Insertion and withdrawal forces**

Insertion and withdrawal force	
Specification	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

1757093 MSTB 2,5/10-ST-5,08**18 Electrical tests**

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

1757093 MSTB 2,5/10-ST-5,08**19 Air and creepage distances**

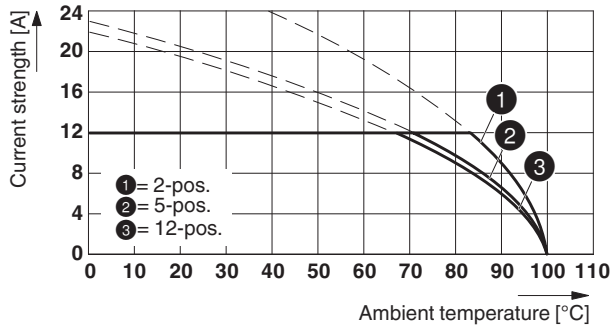
Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Degree of pollution	3	2	2
Overvoltage category	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

1757093 MSTB 2,5/10-ST-5,08

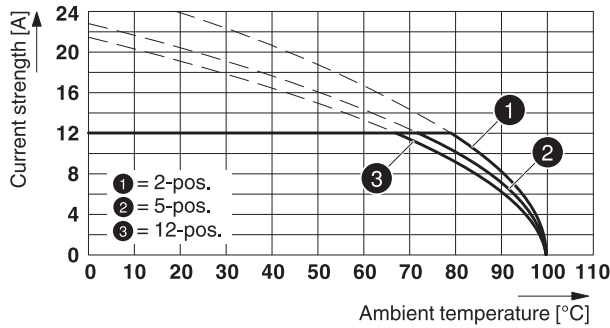
20 Current carrying capacity/derating curves

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 mm ²

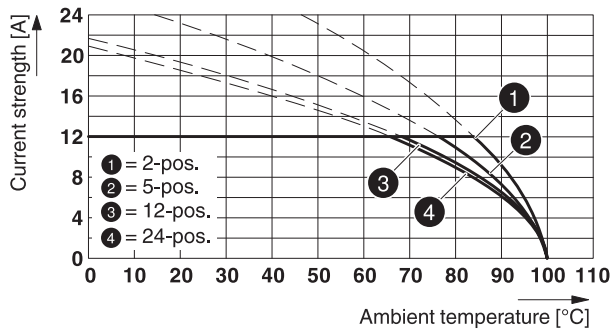
Type: MSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR



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

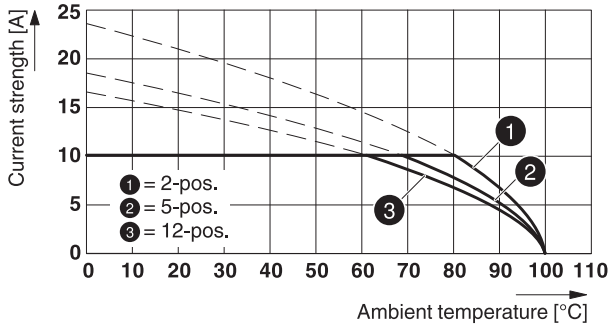


Type: MSTB 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P26THR

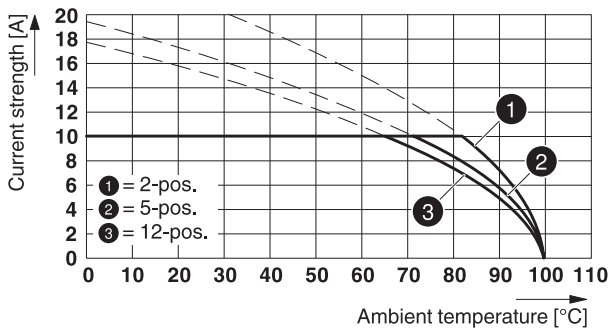


1757093 MSTB 2,5/10-ST-5,08

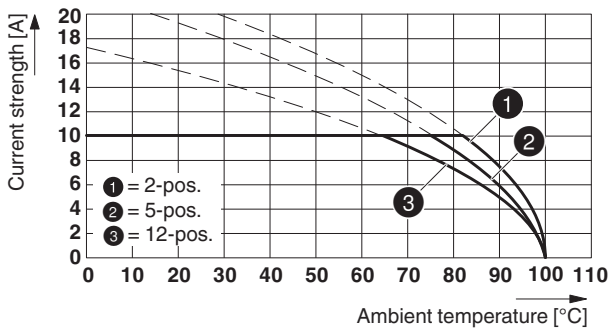
Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G-5,08



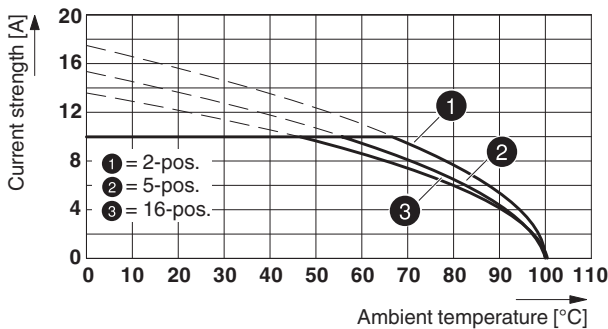
Type: MSTB 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08



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

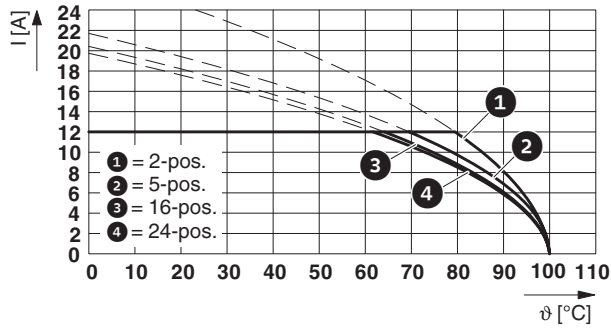


Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G-5,08

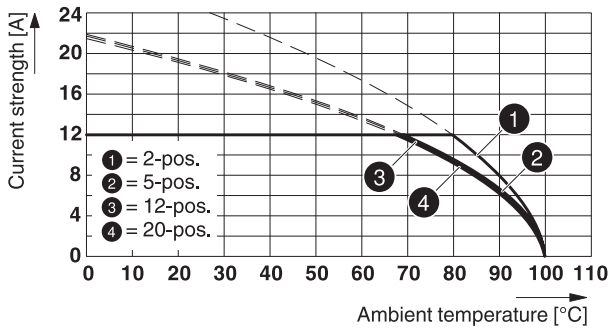


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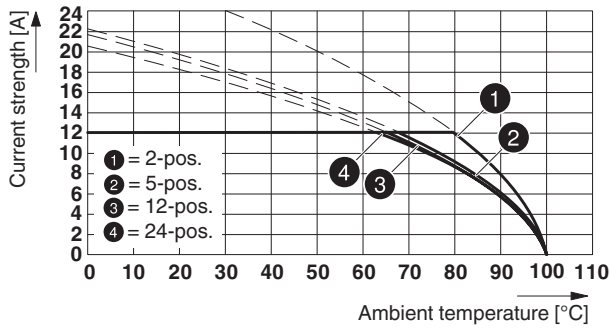
Type: MSTB 2,5/...-ST-5,08 with SMSTB 2,5/...-G-5,08



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

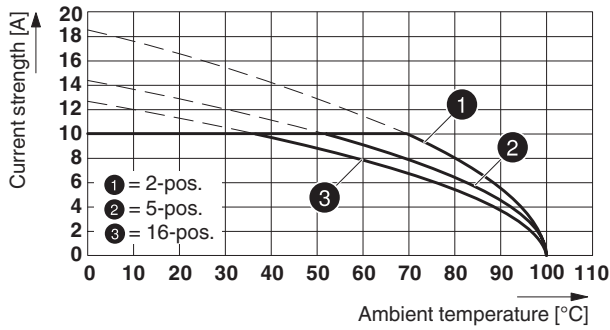


Type: MSTB 2,5/...-ST-5,08 with MSTB 2,5/...-G-5,08

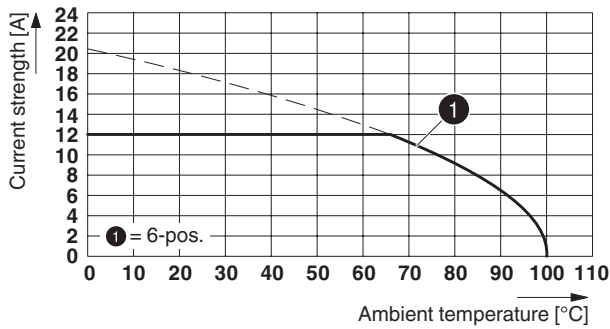


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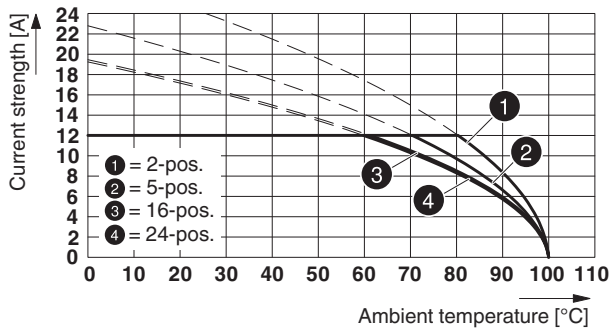
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Type: MSTB 2,5/...-ST(-5,08) with EMSTBVA 2,5/...-G(-5,08)

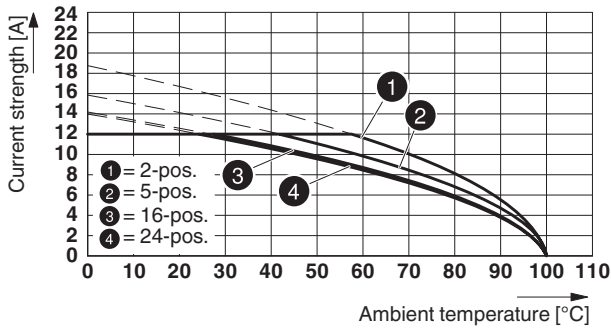


Type: MSTB 2,5/...-ST-5,08 with MSTBW 2,5/...-G-5,08

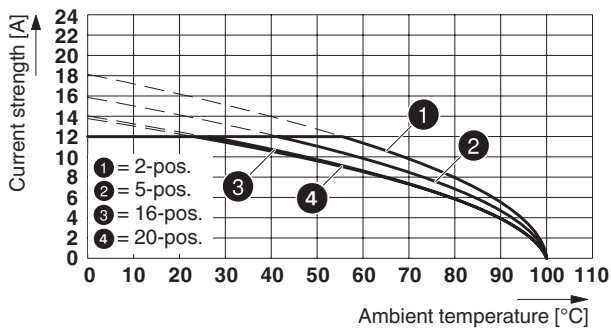


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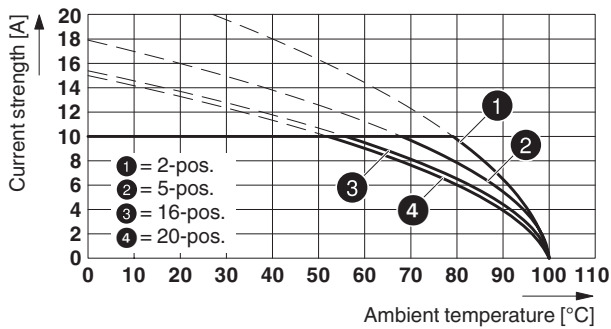
Type: MSTB 2,5/...-ST-5,08 with MSTBVA 2,5/...-G-5,08



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

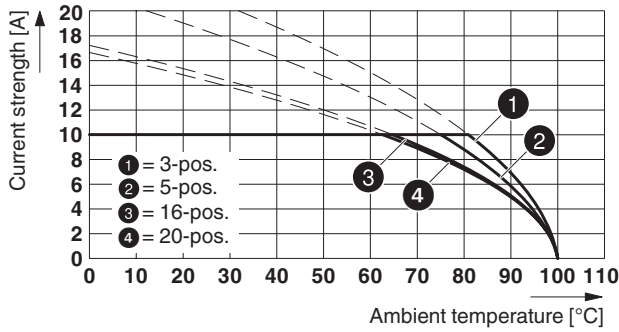


Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G1-5,08

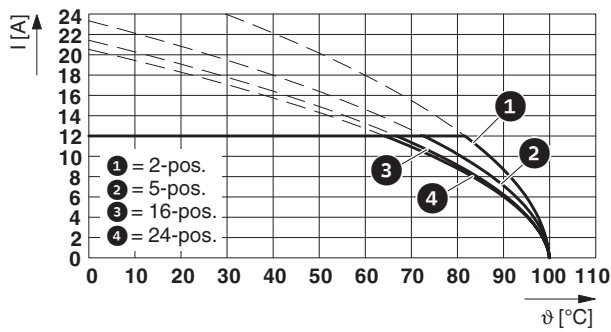


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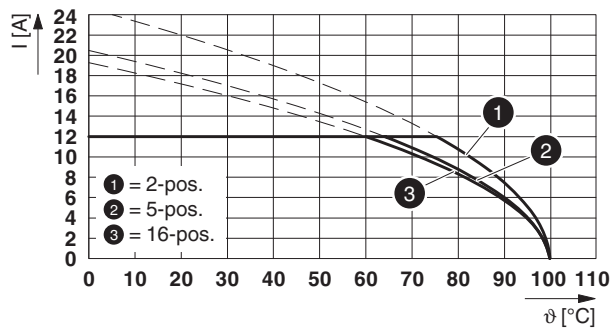
Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G1-5,08



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



1757093 MSTB 2,5/10-ST-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

1757093 MSTB 2,5/10-ST-5,08**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

1757093 MSTB 2,5/10-ST-5,08

24 Approvals / Certificates

CSA 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
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 [mm ²]
	250 V	12 A	-	0.2 - 2.5
EAC 				
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
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 [mm ²]
	250 V	12 A	-	0.2 - 2.5

1757093 MSTB 2,5/10-ST-5,08**25 Commercial Data**

Item no.	1757093
Type	MSTB 2,5/10-ST-5,08
Pieces per package	50
Net weight	16.604 g
GTIN	4017918029623
	Information that applies locally, see link on page 1

26 corresponding headers

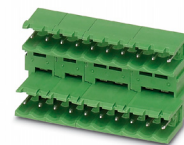
Item no.	Type
1735808	MSTBW 2,5/10-G-5,08
1755817	MSTBVA 2,5/10-G-5,08
1955934	CCVA 2,5/10-G-5,08 P26THR
1956043	CCVA 2,5/10-G-5,08 P26THRR88

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
	1783740	KGS-MSTB 2,5/10
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

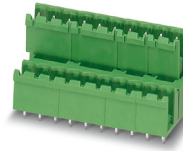
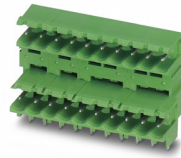
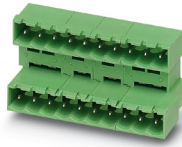
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28 Combination tests



MSTB 2,5/10-ST	CC 2,5/10-G	CCV 2,5/10-G	CCVA 2,5/10-G	MDSTB 2,5/10-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	1.3 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 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	12	24	12
Tested conductor cross section	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
Test current	12 A	12 A	12 A DC	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
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 2,5/10-ST**

IEC 61984

MDSTBA 2,5/10-G

IEC 61984

MDSTBW 2,5/10-G

IEC 61984

MDSTBV 2,5/10-G

IEC 61984

SMSTB 2,5/10-G

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	1.3 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 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	12	12	24
Tested conductor cross section	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
Test current	10 A	10 A	10 A	12 A
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed	Test passed

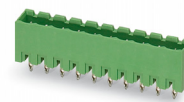
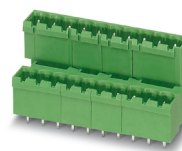
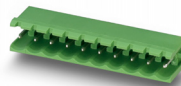
Climatic tests (D)

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 2,5/10-ST**

IEC 61984

MVSTBU 2,5/10-GB

IEC 61984

MSTB 2,5/10-G

IEC 61984

MDSTBVA 2,5/10-G

IEC 61984

EMSTBVA 2,5/10-G

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 Requirement >20 N	Test passed	Test passed	Test passed	
Contact holder in insert 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 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	10 ¹² Ω

Thermal tests (C)

Tested number of positions	20	24	16	6
Tested conductor cross section	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
Test current	12 A	12 A	10 A	12 A
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed	

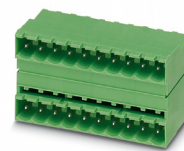
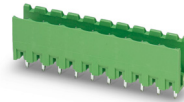
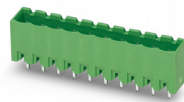
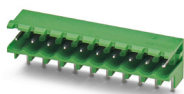
Climatic tests (D)

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 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)

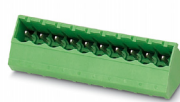
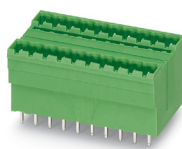
Specification	IEC 61984:2008-10	IEC 61984:2008-10	IEC 61984:2008-10	IEC 61984:2008-10
Degree of protection	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger

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MSTB 2,5/10-ST	MSTBW 2,5/10-G	MSTBVA 2,5/10-G	MSTBV 2,5/10-G	MDSTB 2,5/10-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 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	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 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	20	24	20	20
Tested conductor cross section	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²
Test current	12 A	12 A	12 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
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 2,5/10-ST****MDSTBV 2,5/10-G1****SMSTBA 2,5/10-G****DFK-MSTBA 2,5/10-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
Requirement >20 N

Test passed

Test passed

Test passed

Contact holder in insert
Requirements >20 N

Test passed

Test passed

Test passed

Durability tests (B)Contact resistance R₁ 1st level

1.4 mΩ

1.3 mΩ

1.4 mΩ

Contact resistance R₁ 2nd level

1.4 mΩ

Insertion/withdrawal cycles

25

25

25

Contact resistance R₂

1.4 mΩ

1.3 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

Power-frequency withstand voltage
Voltage waveform ≥ (50/60 Hz)

2.21 kV

2.21 kV

2.21 kV

Insulation resistance
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 mm²2.5 mm²2.5 mm²

Test current

10 A

12 A

12 A

Upper limiting temperature
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 dm³ SO₂ on 300 dm³/
40 °C/1 cycle0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycleRated impulse voltage at sea level
Voltage waveform ≥ (1.2/50 μs)

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

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 fingerFinger safety with IP20
test fingerFinger safety with IP20
test finger