

Data sheet

Order No.: 1792346

Type: MVSTBR 2,5/12-ST-5,08

Plug component, Screw connection with tension sleeve



The figure shows a 10-position version of the product

1 Main features



• No. of pos.	12	• Nominal current	12 A
• Conductor cross section	2.5 mm ²	• Nominal voltage	320 V
• Color	green	• Connection direction	90 °
• 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.

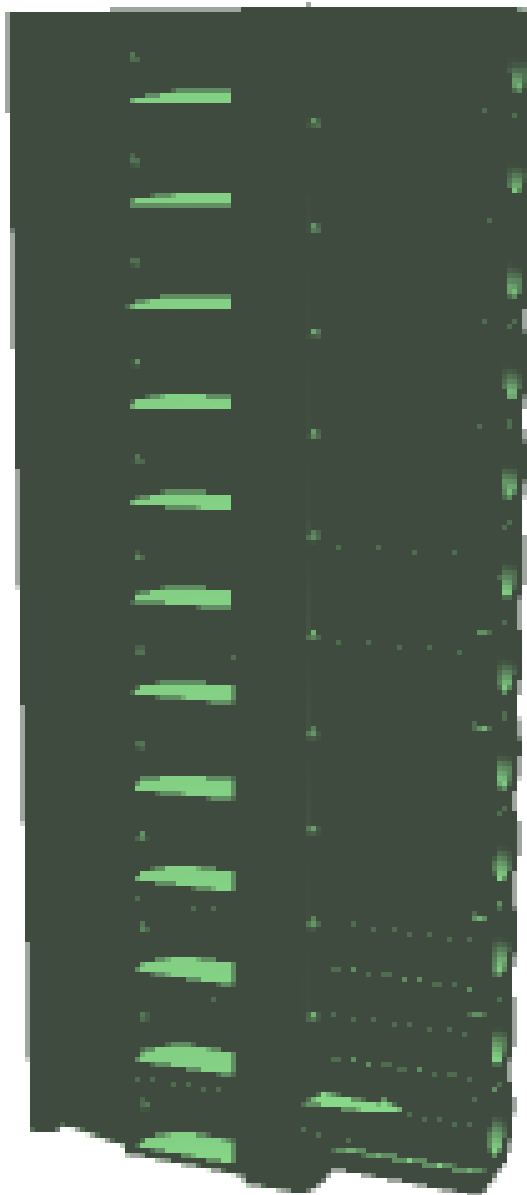
It can be downloaded at: phoenixcontact.net/product/1792346

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



1792346 MVSTBR 2,5/12-ST-5,08**5 item properties**

Order No.	1792346
Type	MVSTBR 2,5/12-ST-5,08
Type of contact	Female connector
Range of articles	MVSTBR 2,5/...-ST
Pitch	5.08 mm
Number of positions	12
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
Locking	without

5.1 Connection capacity

Conductor cross section, solid	0.2 mm ² to 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² to 2.5 mm ²
Conductor cross section AWG/kcmil	24 to 12
2 conductors with same cross section, solid	0.2 mm ² to 1 mm ²
2 conductors with same cross section, stranded	0.2 mm ² to 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² to 2.5 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² to 2.5 mm ²
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm ² to 1 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm ² to 1.5 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.4 mm
Stripping length	7 mm

5.2 Material data

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	Sn 5 µm ... 7 µm
Surface contact area	Sn 5 µm ... 7 µm
Surface characteristics	hot-dip tin-plated
Insulating material data	
Insulating material	PA
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Color	green (6021)
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

6 Dimensions

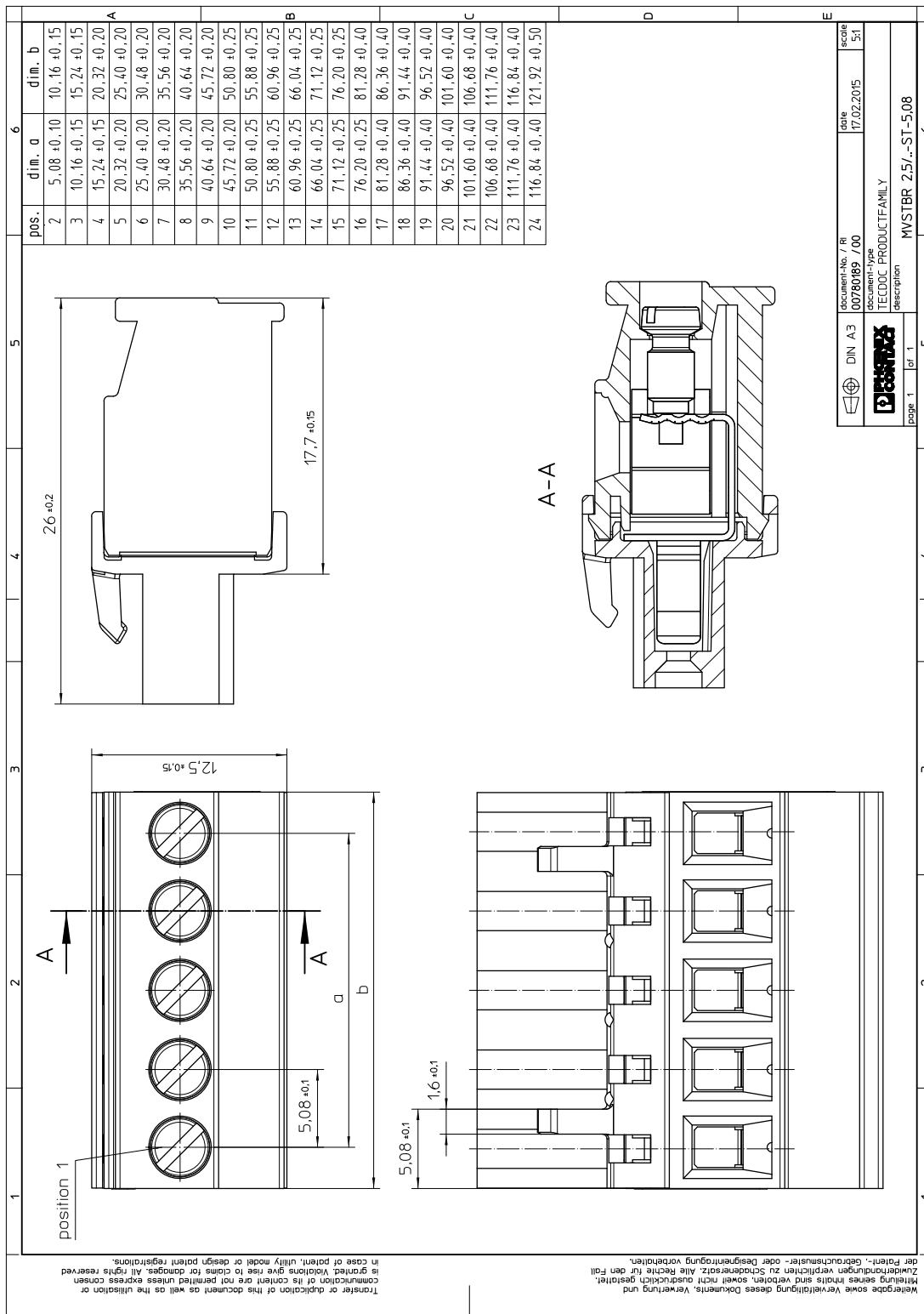
1792346 MVSTBR 2,5/12-ST-5,08

6.1 Dimensions for the product

Length	12.5 mm
Width	60.96 mm
Total height	26 mm
Dimension a	55.88 mm

1792346 MVSTBR 2,5/12-ST-5,08

7 Series drawing



1792346 MVSTBR 2,5/12-ST-5,08**8 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	50

9 Application**9.1 Temperature limit values**

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

1792346 MVSTBR 2,5/12-ST-5,08**10 Mechanical tests**

Mechanical test group A	
Specification	IEC 61984:2008-10
Visual test	Test passed
Specification	IEC 60512-1-1:2002-02
Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02
Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12
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
Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N
Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	33 N

10.1 Termination and connection method

Specification	IEC 60999-1:1999-11
Check for damage to conductor or loosening	Test passed

10.2 Pull-out test

Termination and connection method: 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 / stranded / > 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 / stranded / > 50 N

1792346 MVSTBR 2,5/12-ST-5,08**11 Electrical tests****11.1 Electrical data**

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	2.5 mΩ
Degree of pollution	2

11.2 Air and creepage distances

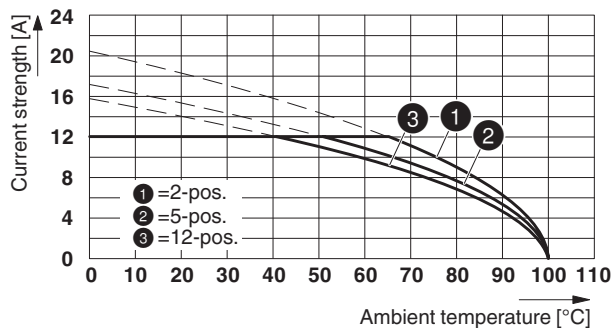
Component	Plug component		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Degree of pollution	3	2	2
Overvoltage category	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	4 mm	1.6 mm	3.2 mm
Note on connection cross section	With connected conductor 4 mm ² (solid).		

1792346 MVSTBR 2,5/12-ST-5,08

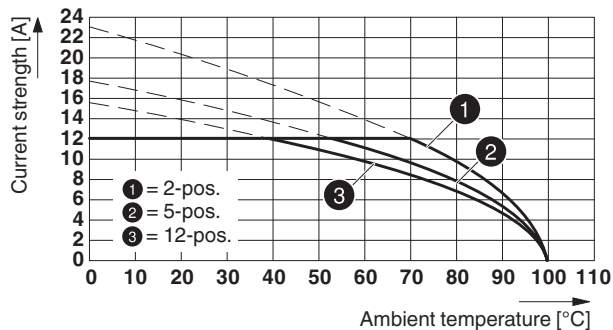
12 Current carrying capacity/derating curves

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	0.8
Number of positions	See diagram
Conductor cross section	2.5 mm ²

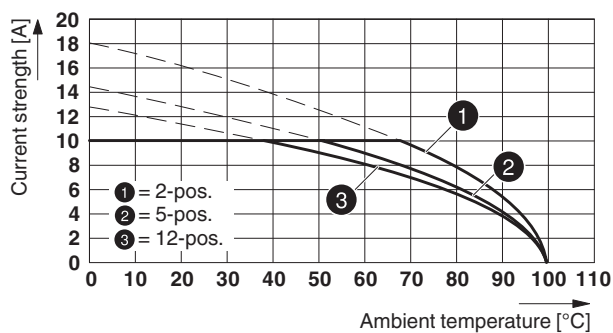
Type: MVSTBR 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR



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

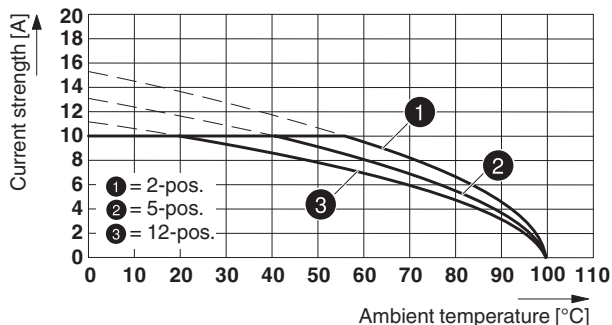


Type: MVSTB(R/W) 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08

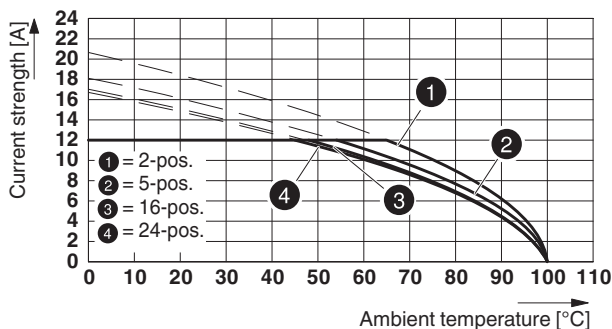


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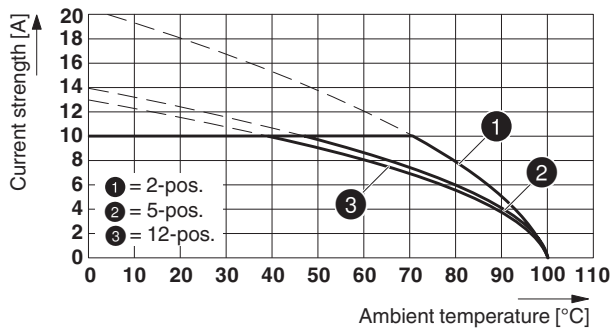
Type: MVSTB(R/W) 2,5/...-ST with MDSTBV 2,5/...-G-5,08



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



Type: MVSTB(R/W) 2,5/...-ST-5,08 with MDSTBW 2,5/...-G-5,08



Type: MVSTB(R/W) 2,5/...-ST with MDSTBVA 2,5/...-G-5,08

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

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1792346 MVSTBR 2,5/12-ST-5,08**13 Environmental and durability tests****13.1 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	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis


14 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
Lock	no
Connection method	Screw terminal points

15 Approvals

CSA 				
Use group	B	D		
mm ² /AWG/kcmil	28-12	28-12		
Voltage	300 V	300 V		
Current	10 A	10 A		

VDE Gutachten mit Fertigungsüberwachung 				
mm ² /AWG/kcmil	0.2-2.5			
Voltage	250 V			
Current	12 A			

IECEE CB Scheme 				
mm ² /AWG/kcmil	0.2-2.5			
Voltage	250 V			
Current	12 A			

cULus Recognized 				
Use group	B	D		
mm ² /AWG/kcmil	30-12	30-12		
Voltage	300 V	300 V		
Current	15 A	10 A		

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Product version 02

Document revision 0

1792346 MVSTBR 2,5/12-ST-5,08

EAC ENEC

1792346 MVSTBR 2,5/12-ST-5,08**16 Commercial Data**

Order No.	1792346
Type	MVSTBR 2,5/12-ST-5,08
Pieces per package	50
Net weight	25.28 g
GTIN	4017918044824
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

17 corresponding headers

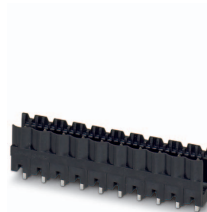
Order No.	Type
1735785	MSTBW 2,5/12-G-5,08
1755833	MSTBVA 2,5/12-G-5,08
1757349	MSTBA 2,5/12-G-5,08
1758115	MSTBV 2,5/12-G-5,08
1759114	MSTB 2,5/12-G-5,08
1762606	MDSTBV 2,5/12-G1-5,08
1762703	MDSTB 2,5/12-G1-5,08
1767478	SMSTBA 2,5/12-G-5,08
1768040	MSTBA 2,5/12-G-5,08-LA
1769560	SMSTB 2,5/12-G-5,08
1808560	MSTBV 2,5/12-GEH-5,08
1842160	MDSTBA 2,5/12-G-5,08
1842319	MDSTBW 2,5/12-G-5,08
1842610	MDSTB 2,5/12-G-5,08
1845439	MDSTBVA 2,5/12-G-5,08
1845581	MDSTBV 2,5/12-G-5,08
1859616	EMSTBVA 2,5/12-G-5,08
1880407	EMSTBA 2,5/12-G-5,08
1898936	DFK-MSTBA 2,5/12-G-5,08
1899236	DFK-MSTBVA 2,5/12-G-5,08
1954579	CC 2,5/12-G-5,08 P26THR
1954689	CC 2,5/12-G-5,08 P26THRR88
1955028	CCA 2,5/12-G-5,08 P26THR
1955138	CCA 2,5/12-G-5,08 P26THRR88
1955510	CCV 2,5/12-G-5,08 P26THR
1955620	CCV 2,5/12-G-5,08 P26THRR88
1955950	CCVA 2,5/12-G-5,08 P26THR
1956069	CCVA 2,5/12-G-5,08 P26THRR88
1959163	CCA 2,5/12-GL-5,08P26THR
1959231	CCA 2,5/12-GL-5,08P26THRR88
1959309	CCA 2,5/12-GR-5,08P26THR
1959370	CCA 2,5/12-GR-5,08P26THRR88
1960000	CCVA 2,5/12-GL-5,08P26THR
1960110	CCVA 2,5/12-GL-5,08P26THRR88
1960181	CCVA 2,5/12-GR-5,08P26THR
1960259	CCVA 2,5/12-GR-5,08P26THRR88

1792346 MVSTBR 2,5/12-ST-5,08**18 Accessories**

Description	Order 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
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT
	0805085	SK 5,08/3,8:SO
	0805412	SK 5,08/3,8:UNBEDRUCKT
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB

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19 Combination tests

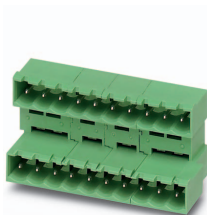


MVSTBR 2,5/12-ST	CC 2,5/12-G	CCA 2,5/12-G	CCV 2,5/12-G	CCVA 2,5/12-G
Specification	IEC 61984	IEC 61984	IEC 61984	IEC 61984
Mechanical tests (A)				
Insertion/withdrawal force per position	approx. 8 N / 6 N		approx. 8 N / 6 N	
Polarization when inserted Requirement >20 N	Test passed		Test passed	
Contact holder in insert Requirements >20 N	Test passed		Test passed	
Durability tests (B)				
Contact resistance R ₁	2.5 mΩ		2.4 mΩ	
Insertion/withdrawal cycles	25		25	
Contact resistance R ₂	2.5 mΩ		2.4 mΩ	
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	4.8 kV		4.8 kV	
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV		2.21 kV	
Insulation resistance Requirements > 5 MΩ	> 0.2 TΩ		> 0.1 TΩ	
Thermal tests (C)				
Tested number of positions	12		12	
Tested conductor cross section	2.5 mm ²		2.5 mm ²	
Test current	12 A		12 A	
Upper limiting temperature Requirements < 100°C	Test passed		Test passed	
Climatic tests (D)				
Test sequence 1: low temperature storage	-40 °C/2 h		-40 °C/2 h	
Test sequence 2: heat storage	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	
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	4.8 kV		4.8 kV	
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV		2.21 kV	
Environmental and endurance tests (E)				
Specification	IEC 61984:2008-10		IEC 61984:2008-10	
Degree of protection	Finger safety with IP20 test finger		Finger safety with IP20 test finger	

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MVSTBR 2,5/..-ST



MDSTBA 2,5/..-G



MDSTBV 2,5/..-G



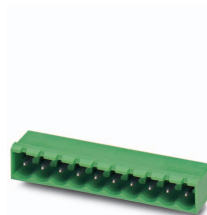
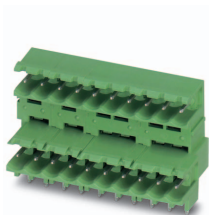
DFK-MSTBA 2,5/..-G



MSTBVK 2,5/..-G

Specification	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 / 7 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 is not applicable
Durability tests (B)				
Contact resistance R ₁	2.7 mΩ	3.8 mΩ		3 mΩ
Insertion/withdrawal cycles	25	25		25
Contact resistance R ₂	2.8 mΩ	3.7 mΩ		3.1 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	> 65 GΩ	> 1 GΩ		3 TΩ
Thermal tests (C)				
Tested number of positions	12	12		24
Tested conductor cross section	2.5 mm ²	2.5 mm ²		2.5 mm ²
Test current	10 A	10 A		12 A DC
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 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
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 finger	Finger safety with IP20 test finger		Finger safety with IP20 test finger

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MVSTBR 2,5/12-ST

MDSTBW 2,5/12-ST

MDSTBVA 2,5/12-ST

MSTBA 2,5/12-ST

Specification	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 R ₁	2.8 mΩ	3.7 mΩ	2.4 mΩ
Insertion/withdrawal cycles	25	25	25
Contact resistance R ₂	2.8 mΩ	3.7 mΩ	2.4 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	> 0.2 TΩ	> 0.1 TΩ	> 75 TΩ
Thermal tests (C)			
Tested number of positions	12	12	24
Tested conductor cross section	2.5 mm ²	2.5 mm ²	2.5 mm ²
Test current	10 A	10 A	12 A DC
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 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
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 finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger



SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

Est.1899

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