

Data sheet

Order No.: 1826296

Type: SMSTB 2,5/ 3-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.	3	• Nominal current	12 A
• Conductor cross section	2.5 mm ²	• Nominal voltage	320 V
• Color	green	• Connection direction	-45 °
• 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
- ✓ Optimized for tight installation situations: operation and conductor connection from one direction
- ✓ Angled conductor connection enables operation and conductor connection from one direction
- ✓ Low temperature rise, thanks to maximum contact force



Make sure you always use the latest documentation.

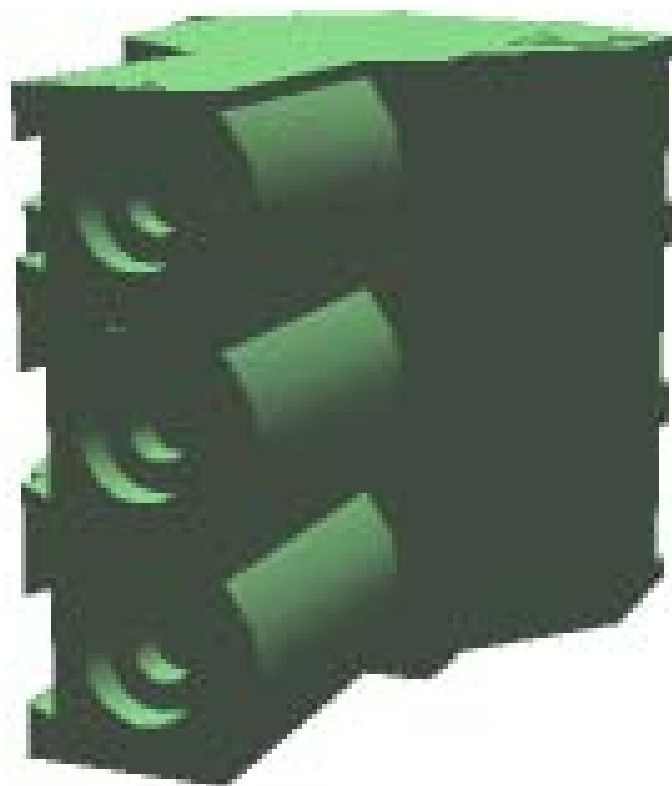
It can be downloaded at: phoenixcontact.net/product/1826296

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1826296 SMSTB 2,5/ 3-ST-5,08

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



1826296 SMSTB 2,5/ 3-ST-5,08**5 item properties**

Order No.	1826296
Type	SMSTB 2,5/ 3-ST-5,08
Type of contact	Female connector
Range of articles	SMSTB 2,5/...-ST
Pitch	5.08 mm
Number of positions	3
Connection method	Screw connection with tension sleeve
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 4 µm ... 8 µm
Surface contact area	Sn 4 µm ... 8 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**6.1 Dimensions for the product**

2017-10-24

Product version 04

Document revision 0

1826296 SMSTB 2,5/ 3-ST-5,08

Length	25.6 mm
Width	15.24 mm
Total height	15.5 mm
Dimension a	10.16 mm

1826296 SMSTB 2,5/ 3-ST-5,08**7 Series drawing****8 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	100

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)

1826296 SMSTB 2,5/ 3-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.	28 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

1826296 SMSTB 2,5/ 3-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	2.3 mΩ
Degree of pollution	2

11.2 Air and creepage distances

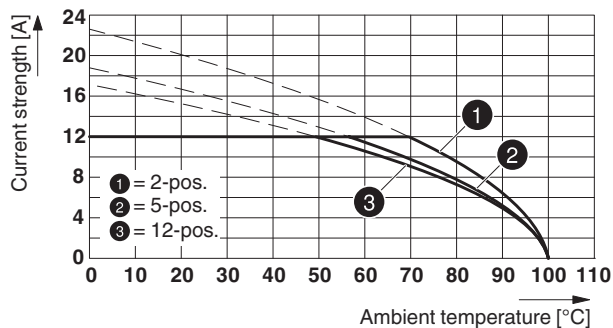
Component	Plug component		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	250 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Degree of pollution	3	2	2
Overvoltage category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

1826296 SMSTB 2,5/ 3-ST-5,08

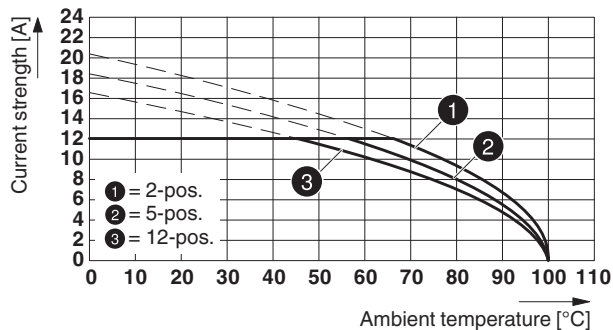
12 Current carrying capacity/derating curves

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

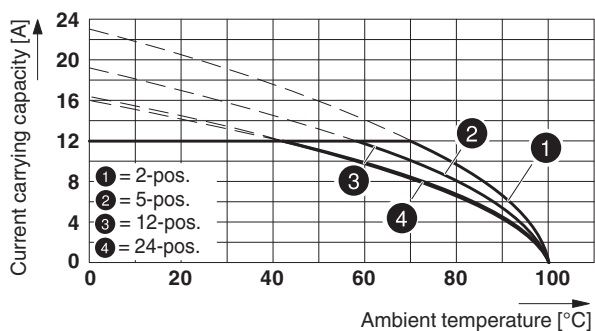
Type: SMSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

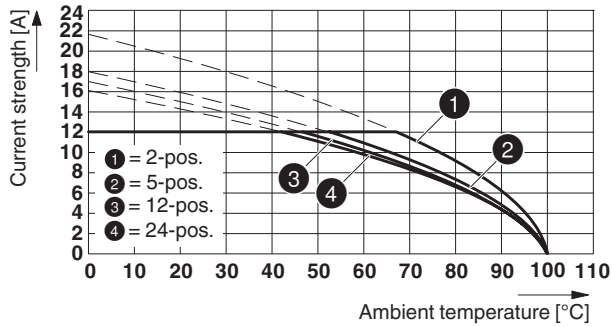


Type: SMSTB 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P26THR



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



1826296 SMSTB 2,5/ 3-ST-5,08**Type: SMSTB 2,5/...-ST-5,08 with MSTB 2,5/...-G-5,08****Type: MSTBP 2,5/...-ST-5,08 with MSTBW 2,5/...-G-5,08**

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


1826296 SMSTB 2,5/ 3-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	15 A	10 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		

EAC 				
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1826296 SMSTB 2,5/ 3-ST-5,08**16 Commercial Data**

Order No.	1826296
Type	SMSTB 2,5/ 3-ST-5,08
Pieces per package	100
Net weight	5.606 g
GTIN	4017918122041
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

17 corresponding headers



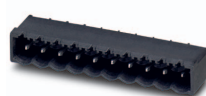
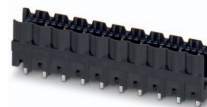

Order No.	Type
1735879	MSTBW 2,5/ 3-G-5,08
1736742	MDSTBV 2,5/ 3-G1-5,08
1755749	MSTBVA 2,5/ 3-G-5,08
1757255	MSTBA 2,5/ 3-G-5,08
1758021	MSTBV 2,5/ 3-G-5,08
1759020	MSTB 2,5/ 3-G-5,08
1762075	MDSTB 2,5/ 3-G-5,08
1762376	MDSTB 2,5/ 3-G1-5,08
1763087	MDSTBV 2,5/ 3-G-5,08
1767384	SMSTBA 2,5/ 3-G-5,08
1769476	SMSTB 2,5/ 3-G-5,08
1770957	MSTBA 2,5/ 3-G-5,08-LA
1802414	MDSTBW 2,5/ 3-G-5,08
1842076	MDSTBA 2,5/ 3-G-5,08
1845345	MDSTBVA 2,5/ 3-G-5,08
1847110	MSTBO 2,5/ 3-GR-5,08
1850440	MSTBO 2,5/ 3-GL-5,08
1859522	EMSTBVA 2,5/ 3-G-5,08
1874714	MDSTBA 2,5/ 3-GL-5,08
1874727	MDSTBA 2,5/ 3-GR-5,08
1874756	MDSTBVA 2,5/ 3-GL-5,08
1874769	MDSTBVA 2,5/ 3-GR-5,08
1880313	EMSTBA 2,5/ 3-G-5,08
1898842	DFK-MSTBA 2,5/ 3-G-5,08
1899142	DFK-MSTBVA 2,5/ 3-G-5,08
1902754	MSTBA 2,5/ 3-G-5,08 THT
1902822	MSTBVA 2,5/ 3-G-5,08 THT
1937240	MSTBA 2,5/ 3-G-5,08 THT-R32
1940428	MSTBVA 2,5/ 3-G-5,08 THT-R56
1954391	CC 2,5/ 3-G-5,08 P26THR
1954595	CC 2,5/ 3-G-5,08 P26THRR32
1954922	CCA 2,5/ 3-G-5,08 P26THR
1955044	CCA 2,5/ 3-G-5,08 P26THRR32
1955390	CCV 2,5/ 3-G-5,08 P26THR
1955536	CCV 2,5/ 3-G-5,08 P26THRR32
1955866	CCVA 2,5/ 3-G-5,08 P26THR
1955976	CCVA 2,5/ 3-G-5,08 P26THRR32

1826296 SMSTB 2,5/ 3-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
	0804293	SK 5,08/3,8:FORTL.ZAHLEN
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB

1826296 SMSTB 2,5/ 3-ST-5,08

19 Combination tests

					
	SMSTB 2,5/...-ST	CC 2,5/...-G	CCA 2,5/...-G	CCV 2,5/...-G	CCVA 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	
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		2.3 mΩ		2.2 mΩ	
Insertion/withdrawal cycles		25		25	
Contact resistance R ₂		2.3 mΩ		2.2 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		> 0.1 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	

1826296 SMSTB 2,5/ 3-ST-5,08



SMSTB 2,5/..-ST



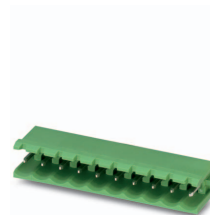
SMSTB 2,5/..-G



SMSTBA 2,5/..-G



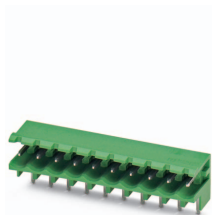
DFK-MSTBA 2,5/..-G



MSTB 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. 11 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	2.1 mΩ	2.3 mΩ		2.4 mΩ
Insertion/withdrawal cycles	25	25		25
Contact resistance R ₂	2.2 mΩ	2.4 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	> 1 TΩ	64 TΩ		> 0.1 TΩ
Thermal tests (C)				
Tested number of positions	24	24		24
Tested conductor cross section	2.5 mm ²	2.5 mm ²		2.5 mm ²
Test current	12 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 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

1826296 SMSTB 2,5/ 3-ST-5,08



SMSTB 2,5/..-ST

MSTBA 2,5/..-G

MSTBW 2,5/..-G

Specification	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	2.2 mΩ	2.4 mΩ		
Insertion/withdrawal cycles	25	25		
Contact resistance R ₂	2.3 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	> 0.2 TΩ		
Thermal tests (C)				
Tested number of positions	24	24		
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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