

Order No.: 1771033

Type: PTSM 0,5/ 3-2,5-H SMD R44

PCB terminal block, Reflow soldering, Push-in spring connection



The figure shows the 3-pos. version

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 3 | • Nominal current | 6 A |
| • Conductor cross section | 0.5 mm ² | • Nominal voltage | 160 V |
| • Color | black (9005) | • Connection direction | 0 ° |
| • Pitch | 2.5 mm | • Type of packaging | packed in cardboard |
| • Connection method | Push-in spring connection | | |

2 Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ High current carrying capacity of 6 A in very compact dimensions
- ✓ Designed for integration into the SMT soldering process
- ✓ Additional solder anchors reduce the mechanical strain on the soldering spots



Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1771033

1771033 PTSM 0,5/ 3-2,5-H SMD R44**3 Table of contents**

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



1771033 PTSM 0,5/ 3-2,5-H SMD R44**5 General Technical Data****5.1 item properties**

Order No.	1771033
Type	PTSM 0,5/ 3-2,5-H SMD R44
Product type	PCB terminal block
Range of articles	PTSM 0,5/...-H-SMD
Pitch	2.5 mm
Range of positions	2...8
Number of positions	3
Number of levels	1
Number of connections	3
Number of potentials	3
Connection method	Push-in spring connection
Mounting type	SMD soldering
Connection direction of the conductor to the PCB	0°
Pin layout	Linear pad geometry
Solder pins per potential	1

5.2 Connection capacity

Conductor cross section, solid	0.14 mm ² ... 0.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 0.5 mm ² (up to 0.75 mm ² supported, at a rated insulation voltage of 32 V at III/2)
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.5 mm ²
Stripping length	6 mm

5.3 Connection capacity AWG

Conductor cross section AWG	26 ... 20
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6 Material properties**6.1 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 (4 - 8 µm Sn)
Soldering area surface	Tin (4 - 8 µm Sn)
Surface characteristics	hot-dip tin-plated

6.2 Material of plastic parts

	Housing
Color	black (9005)
Insulating material	LCP

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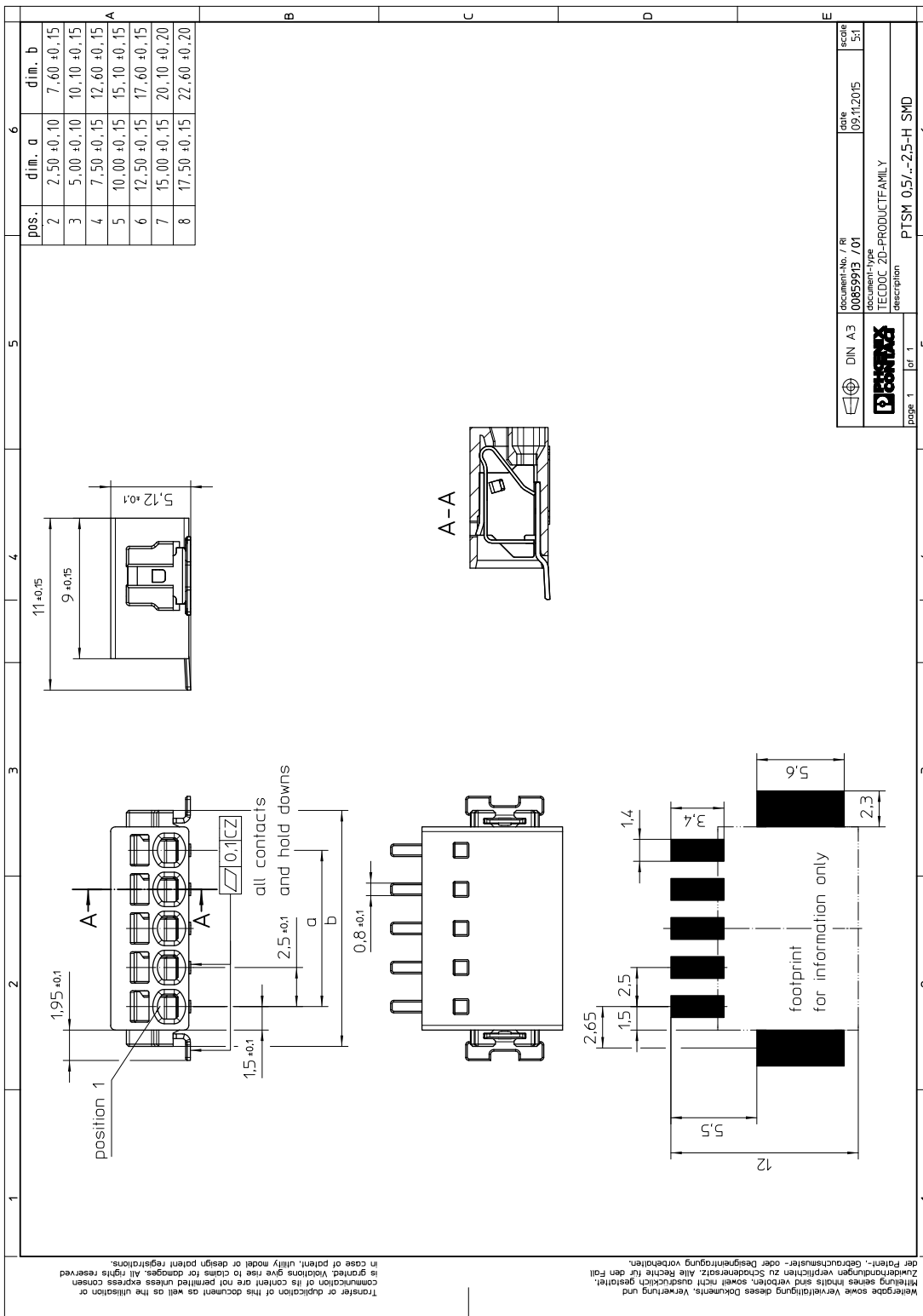
	Housing
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

1771033 PTSM 0,5/ 3-2,5-H SMD R44**7 Dimensions****7.1 Dimensions for the product**

Length	9 mm
Width	10.1 mm
Height (without solder pin)	5.12 mm
Total height	5.12 mm
Dimension a	5 mm

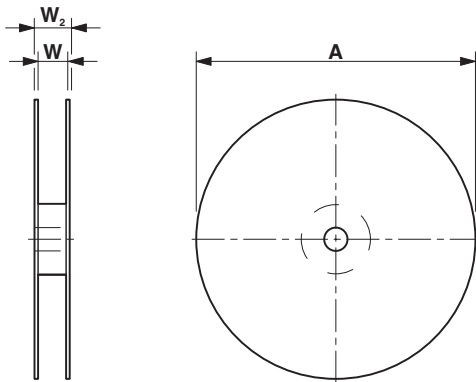
1771033 PTSM 0,5/ 3-2,5-H SMD R44

8 Series drawing



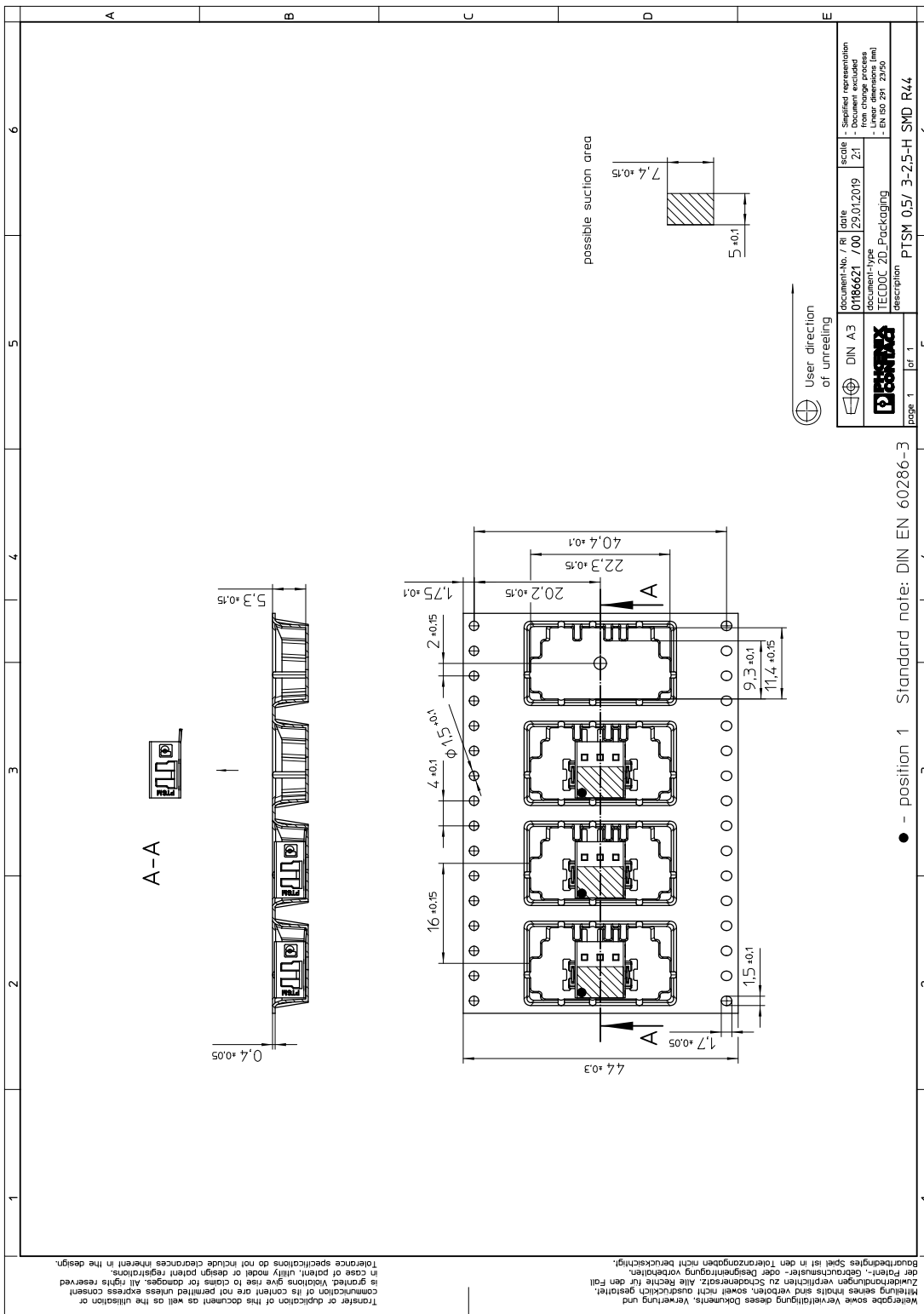
1771033 PTSM 0,5/ 3-2,5-H SMD R44**9 Application****10 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	770
Outer packaging type	Transparent-Bag
[W] tape width	44 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	50.4 mm
Number of products per coil	770



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11 Blister drawing



1771033 PTSM 0,5/ 3-2,5-H SMD R44**11.1 Processing notes**

Process	Reflow soldering
Specification	Following IPC/JEDEC J-STD-020D.1:2008-03
Specification	Following IEC 60068-2-58:2005-02
Moisture Sensitive Level	MSL 1
Classification temperature T_c	max. 260 °C
Solder cycles in the reflow	3
swash circumference	see dimensional drawing

11.2 Temperature limit values

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

1771033 PTSM 0,5/ 3-2,5-H SMD R44**12 Mechanical tests****12.1 Pull-out test**

Specification	IEC 60998-2-2:2002-12
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.14 mm ² / solid / > 7 N
Conductor cross section/conductor type/tractive force actual value	0.14 mm ² / flexible / > 7 N
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	0.5 mm ² / solid / > 30 N
Conductor cross section/conductor type/tractive force actual value	0.75 mm ² / flexible / > 35 N

12.2 Bending test

Specification	IEC 60998-2-2:2002-12
Result	Test passed

12.3 Check for damage to conductor or loosening

Specification	IEC 60998-2-2:2002-12
Result	Test passed

12.4 Electrical performance test

Specification	IEC 60998-2-2:2002-12
Result	Test passed

1771033 PTSM 0,5/ 3-2,5-H SMD R44**13 Electrical tests****13.1 Electrical data**

Rated current / conductor cross section	6 A / 0.5 mm ²
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	
Degree of pollution	2

13.2 Air and creepage distances

Component	PCB terminal block		
Specification	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05		
Mains type	unearthed mains		
Insulating material group	IIIa		
Comparative tracking index (IEC 60112:2003-01)	CTI 175		
Rated insulation voltage	32 V	160 V	160 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	1.5 mm	1.5 mm	1.5 mm
Minimum value of the creepage path requirement in acc. with table	1.3 mm	1.6 mm	1.6 mm

13.3 Temperature rise test

Specification	IEC 60998-2-1:2002-12
Result	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K
Conductor cross section/test current/temperature rise	0.5 mm ² / 6 A / 17 K

13.4 Stoßspannungsprüfung

Result	Test passed
Specification	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05
Rated surge voltage	2.5 kV
Surge voltage between neighboring positions	3 kV

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14 Current carrying capacity/derating curves

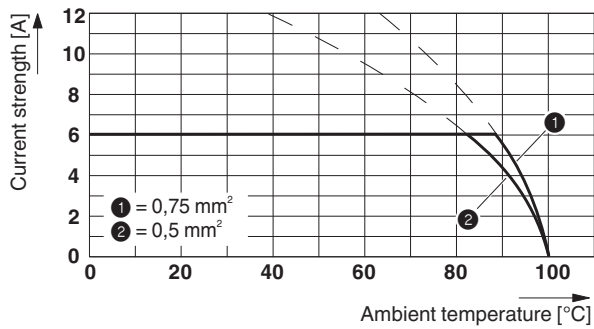
Specification	Following IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	5
Conductor cross section	0.5 mm ²

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Tested in accordance with DIN EN 60512-5-2:2003-01

Reduction factor = 1

No. of positions: 5



1771033 PTSM 0,5/ 3-2,5-H SMD R44**15 Environmental and durability tests****15.1 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
Note	Test object without conductor connection, no damage.

15.2 Assessment of fire risk (glow wire test)

Specification	IEC 60998-1:2002-12		
Result	Test passed		
Temperature	850 °C		
Time of exposure	5 s		

Protection against electric shock

Specification	IEC 60998-1:2002-12
Result	Test passed

15.3 Shock protection

Specification	IEC 61032:1997-12
Back of the hand protection (Ball ø 50)	guaranteed
Finger protection (movable test finger)	
Note	





Mechanical strength/tumbling barrel

Specification	IEC 60998-1:2002-12
Result	Test passed
Height of fall	50 cm
Number of drop cycles	50

15.4 Testing in a saturated atmosphere in the presence of sulfur dioxide

Specification	DIN 50018-EN:1997-06
Result	Test passed
Corrosive stress	KFW 1.0 S/1 cycle
Conductor cross section	0.14 mm ² to 0.5 mm ²

1771033 PTSM 0,5/ 3-2,5-H SMD R44**16 Approvals / Certificates**

UL Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
Usegroup B				
	150 V	5 A	26 - 18	-
EAC 				
VDE Zeichengenehmigung 				
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
Usegroup B				
	150 V	5 A	26 - 20	-

1771033 PTSM 0,5/ 3-2,5-H SMD R44**17 Commercial Data**

Order No.	1771033
Type	PTSM 0,5/ 3-2,5-H SMD R44
Pieces per package	770
Net weight	1.576 g
GTIN	4046356459686
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

18 Accessories

Description	Order No.	Type
Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap	1205202	SZS 0,4X2,0
	3203040	AI 0,25- 6 BU
	3203024	AI 0,25- 6 YE
	3203053	AI 0,34- 6 TQ
	1701076	SAMPLE PTSM 0,5/ 3-2,5-H-SMD