

## PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

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PCB terminal block, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, pitch: 2.5 mm, number of positions: 7, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pad geometry


The figure shows a 3-position version

### 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
- ✓ Vertical connection enables multi-row arrangement on the PCB
- ✓ Additional solder anchors reduce the mechanical strain on the soldering spots



### Key Commercial Data

Packing unit	400 pc
Minimum order quantity	400 pc
GTIN	 4 046356 460477
GTIN	4046356460477

### Technical data

#### Item properties

Brief article description	PCB terminal block
Range of articles	PTSM 0,5/..-V-SMD
Pitch	2.5 mm
Number of positions	7
Connection method	Push-in spring connection
Mounting type	SMD soldering
Pin layout	Linear pad geometry
Number of levels	1

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## Technical data

### Item properties

Number of connections	7
Number of potentials	7

### Electrical parameters

Nominal current	6 A
Nom. voltage	160 V
Rated voltage	32 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

### Connection capacity

Connection method	Push-in spring connection
pluggable	no
Conductor cross section solid	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> (up to 0.75 mm <sup>2</sup> supported, at a rated insulation voltage of 32 V at III/2)
Conductor cross section AWG / kcmil	26 ... 20
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	- / 1.2 mm
Stripping length	6 mm

### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface soldering area (top layer)	Tin (4 - 8 µm Sn)

### Material data - housing

Housing color	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

### Dimensions for the product

Length [ l ]	7 mm
Width [ w ]	22.6 mm
Height [ h ]	9 mm

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## Technical data

### Dimensions for the product

Pitch	2.5 mm
Height (without solder pin)	9 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	400
Denomination packing units	Pcs.
[W] tape width	44 mm
[A] coil diameter	330 mm
Outer packaging type	Transparent-Bag

### General product information

Type of note	Note on application
Note	Pick and place pads may protrude beyond the components. The PCB layout must ensure that collisions are avoided when components are assembled.

### Processing notes

Process	Reflow soldering
Specification	Following IPC/JEDEC J-STD-020D.1:2008-03
	Following IEC 60068-2-58:2005-02
Moisture Sensitive Level	MSL 1
Classification temperature T <sub>c</sub>	260 °C
Solder cycles in the reflow	3

### Ambient conditions

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)

### Termination and connection method

Connection test	IEC 60998-2-2:2002-12
Test result	Test passed
Test for conductor damage and slackening	IEC 60998-2-2:2002-12
	Test passed

### Pull-out test

Pull-out test	IEC 60998-2-2:2002-12
	Test passed
Conductor cross section / conductor type / tensile force	0.14 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	0.5 mm <sup>2</sup> / solid / > 20 N
	0.75 mm <sup>2</sup> / flexible / > 30 N

### Mechanical tests according to standard

# PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

## Technical data

### Mechanical tests according to standard

Test specification	IEC 60998-2-2 (in parts)
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### Electrical tests

Rated current	6 A
Conductor cross section	0.5 mm <sup>2</sup>
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	1.3 mm
Minimum creepage distance value (III/2)	1.6 mm
Minimum creepage distance value (II/2)	1.6 mm

### Temperature-rise test

Specification	IEC 60998-2-1:2002-12
Result	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K

### Current carrying capacity / derating curves

Caption	Type: PTSM 0,5/...-2,5-V SMD R44 Tested according to DIN EN 60512-5-2:2003-01 Reduction factor = 1 Number of positions: 5
Specification	Following IEC 60512-5-2:2002-02
Number of positions	5
Reduction factor	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

### Resistance to ageing, humidity and penetration of solids

Dry heat	168 h/100°C
Humid heat	48 h/30 °C/92 %

### Insulation resistance

## PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

### Technical data

#### Insulation resistance

Specification	IEC 60998-1:2002-12
Result	Test passed
Insulation resistance, neighboring positions	1 TΩ

#### Glow-wire test

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

#### Mechanical strength/tumbling barrel test

Specification	IEC 60998-1:2002-12
Height of fall	50 cm
Number of drop cycles	50
Rotation speed	5 rpm

#### Standards and Regulations

Connection in acc. with standard	EN-VDE
	UL
Flammability rating according to UL 94	V0

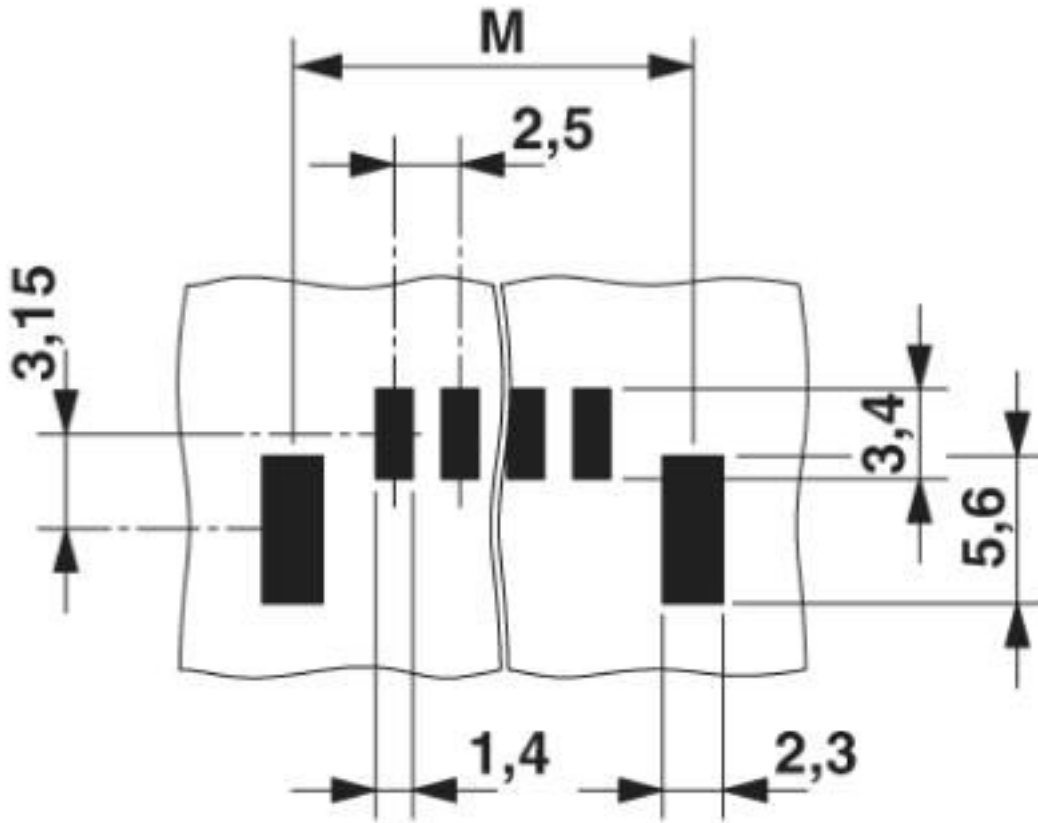
#### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

### Drawings

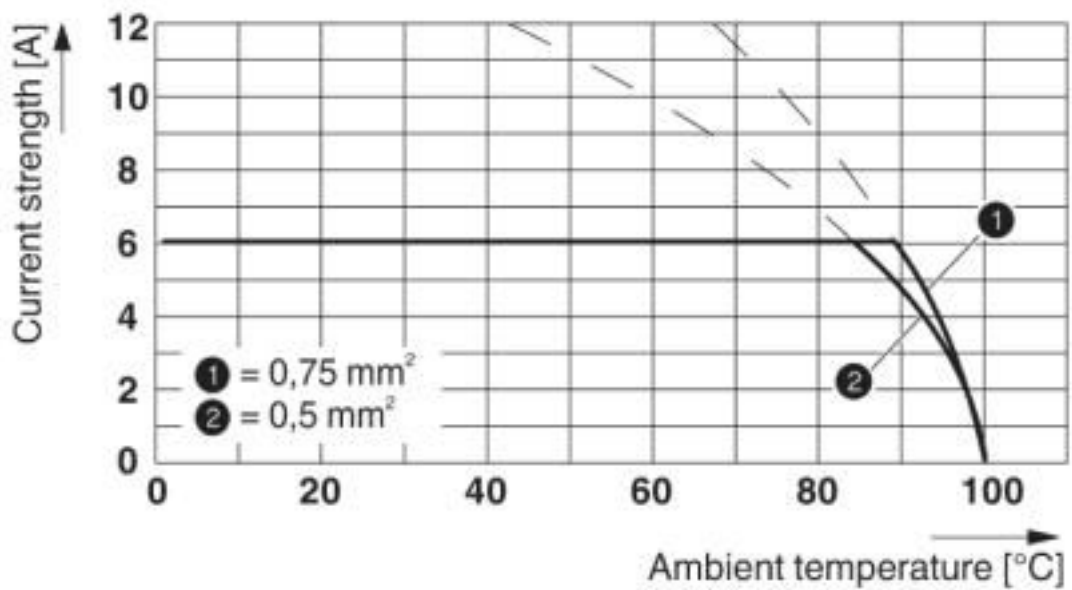
# PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

Drilling diagram



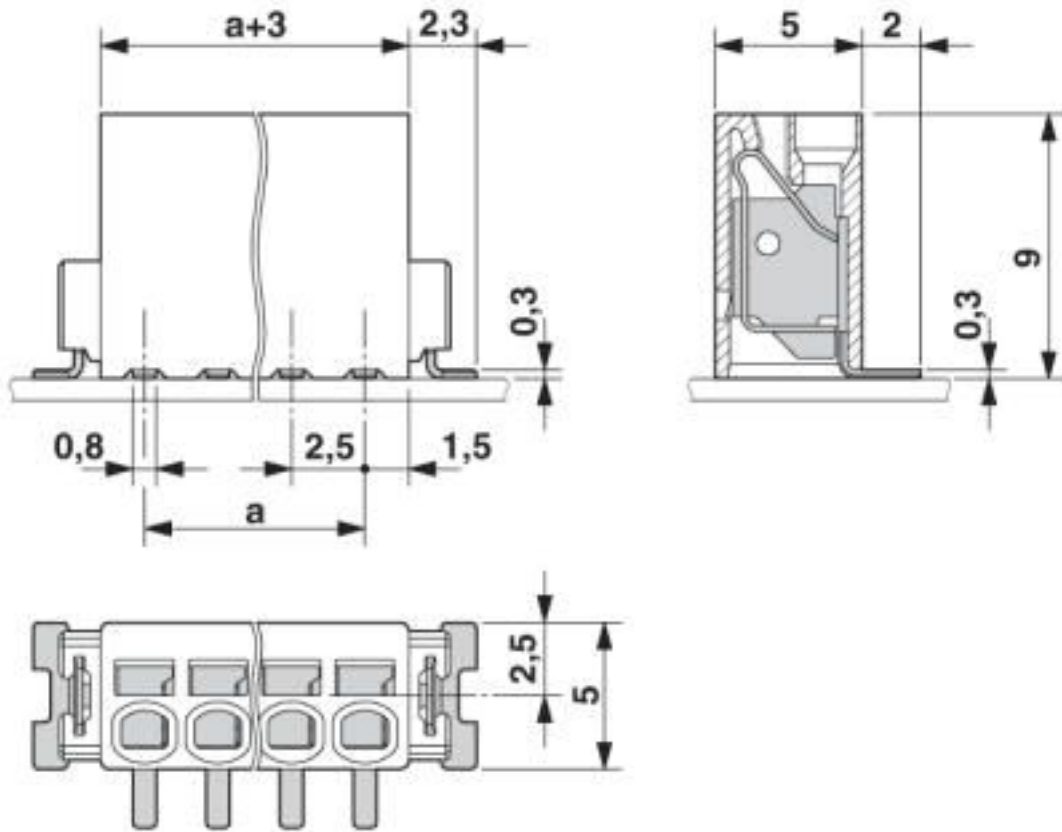
Dimension M: 20.9 mm

Diagram



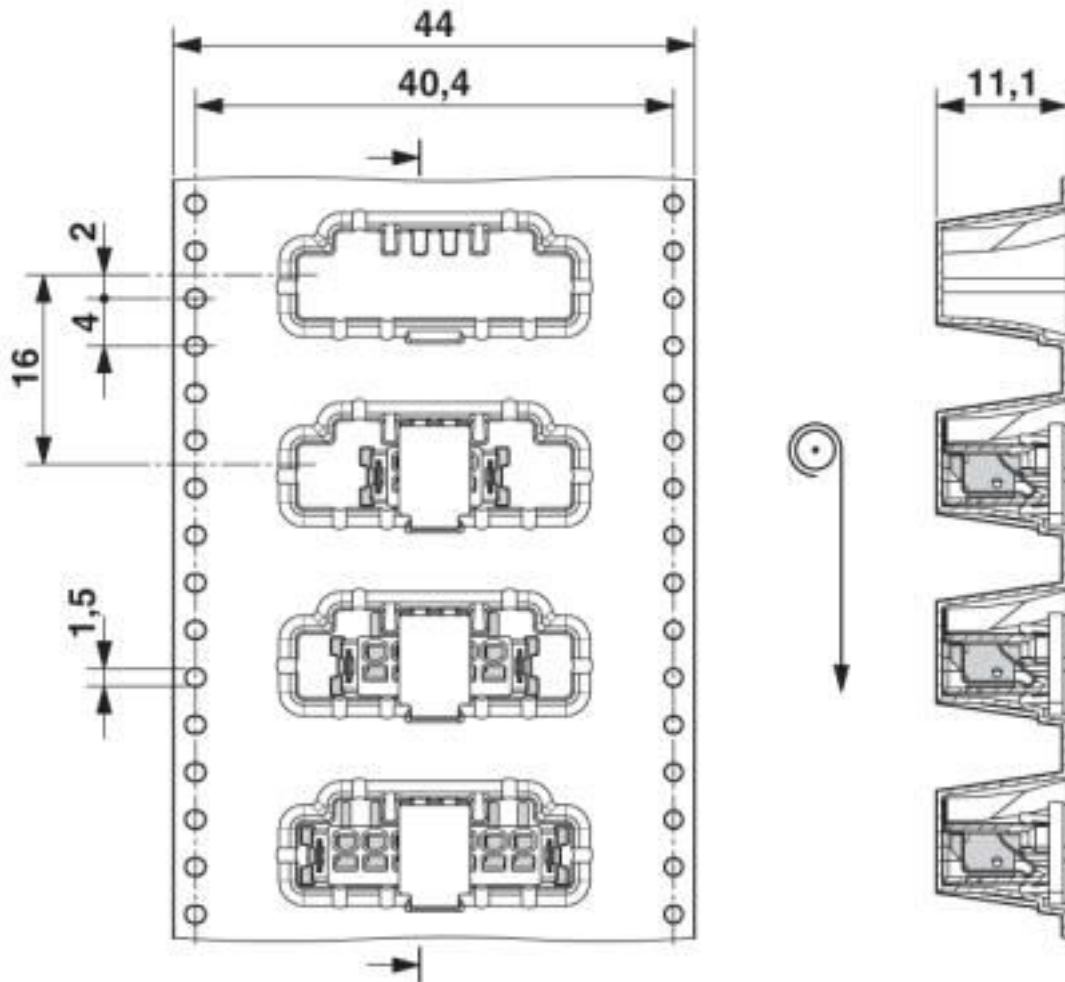
# PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

Dimensional drawing



# PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27440401
eCl@ss 4.0	27141100
eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27261100
eCl@ss 6.0	27261100
eCl@ss 7.0	27440401
eCl@ss 8.0	27440401
eCl@ss 9.0	27440401

### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002643



# PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

## Classifications

### ETIM

ETIM 5.0	EC002637
ETIM 6.0	EC002643
ETIM 7.0	EC002643

### UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	39121432
UNSPSC 12.01	39121432
UNSPSC 13.2	39121432
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

## Approvals


### Approvals


#### Approvals

UL Recognized / VDE Zeichengenehmigung / EAC / cULus Recognized

#### Ex Approvals

### Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> E118976-20130619
		B
Nominal voltage UN		150 V
Nominal current IN		5 A
mm <sup>2</sup> /AWG/kcmil		26-18

VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40048725
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## Approvals

EAC		B.01687
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20030527
		B	
Nominal voltage UN	150 V		
Nominal current IN	5 A		
mm <sup>2</sup> /AWG/kcmil	26-20		

## Accessories

### Accessories

#### Cable end sleeve

Ferrule - AI 0,25- 6 BU - 3203040



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: blue

Ferrule - AI 0,25- 6 YE - 3203024



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: yellow

Ferrule - AI 0,34- 6 TQ - 3203053



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: turquoise

#### Screwdriver tools

## PCB terminal block - PTSM 0,5/ 7-2,5-V SMD R44 - 1771143

### Accessories

Screwdriver - SZS 0,4X2,0 - 1205202



Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap

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### Additional products

Sample set - SAMPLE PTSM 0,5/ 7-2,5-V-SMD - 1701089



PCB terminal block, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, pitch: 2.5 mm, number of positions: 7, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: black, Pin layout: Linear pad geometry, Solder pin [P]: 2 mm. SAMPLE set with 5 items in belt section. When used as part of soldering process, please use items without SAMPLE marking

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[15602-04-08-21](#) [BA311TU](#) [BA411SU](#) [MV-152](#) [MV-252-D](#) [MV-253/NCNOC](#) [MV-254-D](#) [MV-255](#) [MV-462](#) [MV-493](#) [MVE-252](#) [MVE-253](#)  
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[30.106](#)