

SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054  
<https://www.phoenixcontact.com/pc/products/1821054>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PCB terminal block, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, number of potentials: 8, number of rows: 1, number of positions per row: 8, product range: PTSM 0,5/..-V-SMD WH, pitch: 2.5 mm, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: signal white, Pin layout: Linear pad geometry, Solder pin [P]: 2 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. SAMPLE set with 5 items in belt section. When used as part of soldering process, please use items without SAMPLE marking

Your advantages

- White design: Stable color when welding and during use
- 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

Commercial data

Item number	1821054
Packing unit	5 pc
Minimum order quantity	5 pc
Note	Made to order (non-returnable)
Product key	AAKDAD
GTIN	4046356787741
Weight per piece (including packing)	2.47 g
Weight per piece (excluding packing)	2.47 g
Customs tariff number	85369010
Country of origin	IN

# SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054

<https://www.phoenixcontact.com/pc/products/1821054>

## Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	PTSM 0,5/...-V-SMD WH
Product line	COMBICON Terminals XS
Number of positions	8
Pitch	2.5 mm
Number of connections	8
Number of rows	1
Number of potentials	8
Pin layout	Linear pad geometry
Solder pins per potential	1

### Data management status

Article revision	00
------------------	----

### Electrical properties

Nominal current $I_N$	6 A
Nominal voltage $U_N$	160 V
Rated voltage (III/3)	63 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV

### Connection data

#### Connection technology

Nominal cross section	0.5 mm <sup>2</sup>
-----------------------	---------------------

#### Conductor connection

Connection method	Push-in spring connection
Conductor cross section rigid	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, with a stripping length of 7.5 mm and a rated insulation voltage of 32 V at III/2)
Conductor cross section AWG	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> (possible from 0.14 mm <sup>2</sup> , when using ferrule AI 0.14- 6 GY in combination with crimping pliers CRIMPFOX 10T-F)
Cylindrical gauge a x b / diameter	- / 1.2 mm
Stripping length	6 mm

# SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054

<https://www.phoenixcontact.com/pc/products/1821054>

## Mounting

Mounting type	SMD soldering
Pin layout	Linear pad geometry

## Processing notes

Process	Reflow soldering
Moisture Sensitive Level	MSL 1
Classification temperature T <sub>c</sub>	260 °C
Solder cycles in the reflow	3

## Material specifications

### 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)

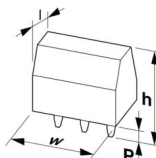
### Material data - housing

Color (Housing)	signal white (9003)
Insulating material	PA GF
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

## Notes

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

## Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	25.1 mm
Height [h]	9 mm
Length [l]	7 mm
Installed height	9 mm
Solder pin length [P]	2 mm

## PCB design

# SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054

<https://www.phoenixcontact.com/pc/products/1821054>

Pad geometry	1.4 x 3.4 mm
Pin spacing	2.5 mm

## Mechanical tests

### Connection test

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

### Test for conductor damage and slackening

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

### Pull-out test

Specification	IEC 60998-2-2:2002-12
Conductor cross section/conductor type/tractive force setpoint/actual value	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

### Flexion test

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

## Electrical tests

### Temperature-rise test

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

### Insulation resistance

Specification	IEC 60998-1:2002-12
Insulation resistance, neighboring positions	> 5 MΩ

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	63 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	1.6 mm
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.5 mm
Rated insulation voltage (II/2)	320 V

# SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054

<https://www.phoenixcontact.com/pc/products/1821054>

Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	1.6 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

### Glow-wire test

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

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
-------------------	---------------------

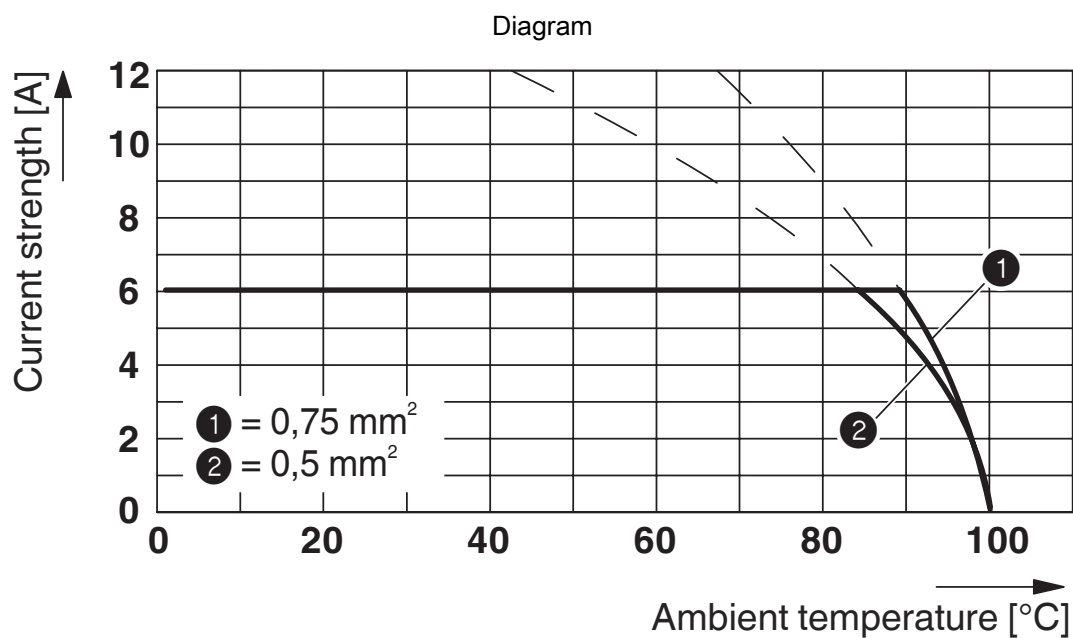
# SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054

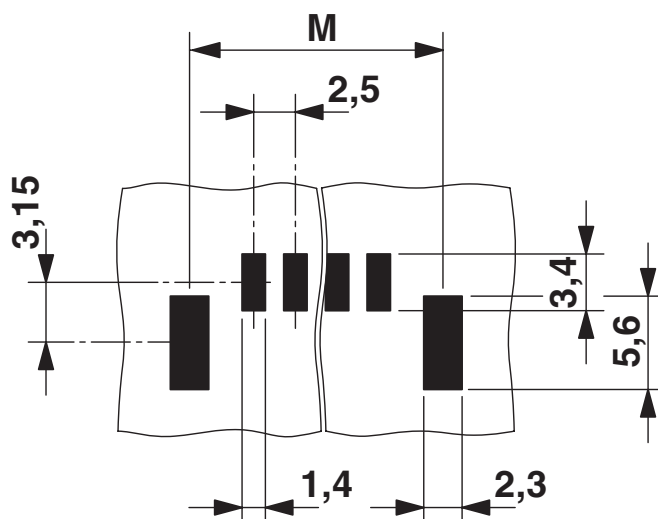
<https://www.phoenixcontact.com/pc/products/1821054>

## Drawings



Type: PTSM 0,5/...-2,5-V SMD WH R44  
Tested in accordance with DIN EN 60512-5-2:2003-01  
Reduction factor = 1  
Number of positions: 5

Drilling plan/solder pad geometry



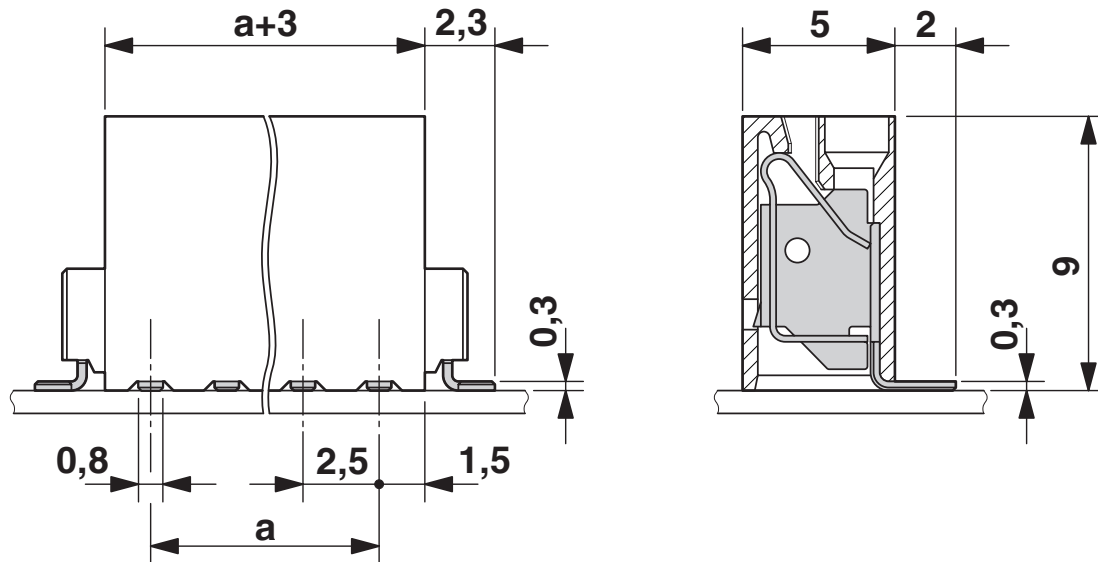
# SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054

<https://www.phoenixcontact.com/pc/products/1821054>

Dimensional drawing



1821054  
<https://www.phoenixcontact.com/pc/products/1821054>

Classifications

ECLASS

ECLASS-11.0	27460101
ECLASS-12.0	27460101
ECLASS-13.0	27460101

ETIM

ETIM 8.0	EC002643
----------	----------

UNSPSC

UNSPSC 21.0	39121400
-------------	----------

1821054  
<https://www.phoenixcontact.com/pc/products/1821054>

Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

# SAMPLE PTSM 0,5/ 8-2,5-V SMDWH - PCB terminal block



1821054

<https://www.phoenixcontact.com/pc/products/1821054>

## Accessories

### SZS 0,4X2,0 - Screwdriver

1205202

<https://www.phoenixcontact.com/pc/products/1205202>



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

### PTSM 0,5/ 8-2,5-V SMD WH R44 - PCB terminal block

1814760

<https://www.phoenixcontact.com/pc/products/1814760>



PCB terminal block, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, number of potentials: 8, number of rows: 1, number of positions per row: 8, product range: PTSM 0,5/..-V-SMD WH, pitch: 2.5 mm, connection method: Push-in spring connection, mounting: SMD soldering, conductor/PCB connection direction: 90 °, color: signal white, Pin layout: Linear pad geometry, Solder pin [P]: 2 mm, number of solder pins per potential: 1, type of packaging: 44 mm wide tape

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

[info@phoenixcontact.com](mailto:info@phoenixcontact.com)