

# PTSM 0,5/ 4-P-2,5 - PCB connector

1778858

<https://www.phoenixcontact.com/us/products/1778858>

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.



The figure shows a 3-position version

PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PTSM 0,5/..-P, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PTSM, locking: without, mounting method: without, type of packaging: packed in cardboard

## 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

## Commercial data

Item number	1778858
Packing unit	250 pc
Minimum order quantity	250 pc
Sales key	AA01
Product key	AAAFPB
GTIN	4046356530064
Weight per piece (including packing)	1.118 g
Weight per piece (excluding packing)	1.1 g
Customs tariff number	85366990
Country of origin	IN

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

## Technical data

### Product properties

Product type	PCB connector
Product family	PTSM 0,5/...-P
Product line	COMBICON Connectors XS
Type	Standard
Number of positions	4
Pitch	2.5 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Mounting type	without

### Electrical properties

#### Properties

Nominal current $I_N$	6 A
Nominal voltage $U_N$	160 V
Contact resistance	3 mΩ
Rated voltage (III/3)	100 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

Type	Standard
Connector system	COMBICON PTSM
Nominal cross section	0.5 mm <sup>2</sup>
Contact connection type	Socket

#### Interlock

Locking type	without
Mounting type	without

#### Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
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	24 ... 20

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

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

## Specifications for ferrules with insulating collar

recommended crimping tool	1134913 CRIMPFOX 10T-F
	1212034 CRIMPFOX 6

## Material specifications

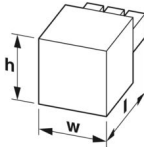
### Material data - contact

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 µm - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 µm - 8 µm Sn)

### Material data - housing

Color (Housing)	black (9005)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
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

## Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	11.1 mm
Height [h]	5 mm
Length [l]	15 mm

## Mechanical tests

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

## Conductor connection

Specification	IEC 60999-1:1999-11
Result	Test passed

## Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

## Repeated connection and disconnection

Specification	IEC 60999-1:1999-11
Result	Test passed

## Pull-out test

Specification	IEC 60999-1:1999-11
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

## Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	10
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	3 N

## Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

## Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

## Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

## Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

## Environmental and real-life conditions

### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R <sub>1</sub>	3 mΩ

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

Contact resistance $R_2$	4 m $\Omega$
Insertion/withdrawal cycles	10

## Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	1.39 kV

## 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

## Ambient conditions

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

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	8

### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 M $\Omega$

### Temperature cycles

Specification	IEC 60999-1:1999-11
Result	Test passed

### 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)	100 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)	1.8 mm
Rated insulation voltage (III/2)	160 V

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

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
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

## Packaging specifications

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

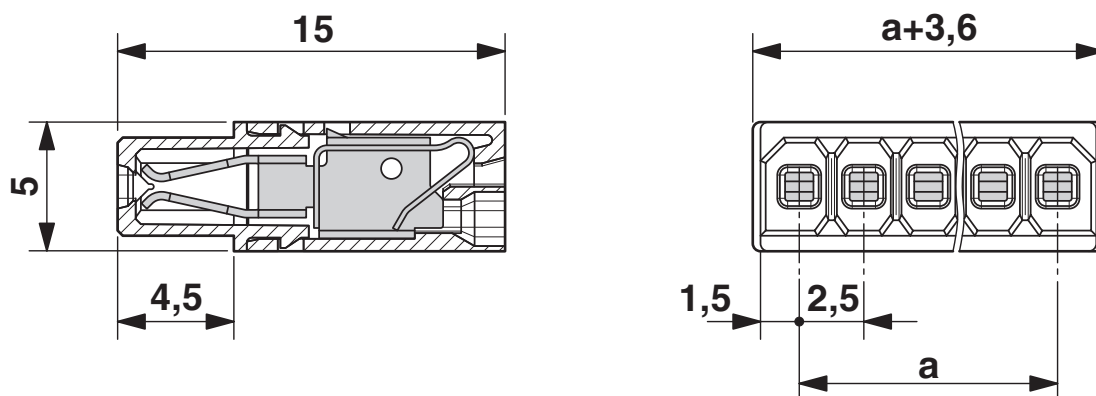
# PTSM 0,5/ 4-P-2,5 - PCB connector

1778858

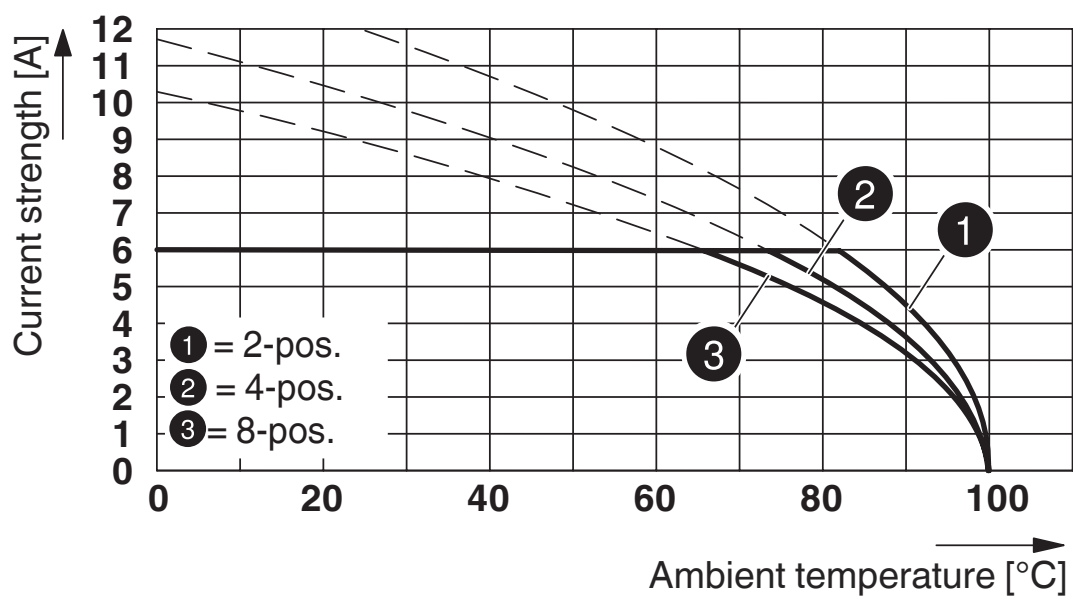
<https://www.phoenixcontact.com/us/products/1778858>

## Drawings

Dimensional drawing



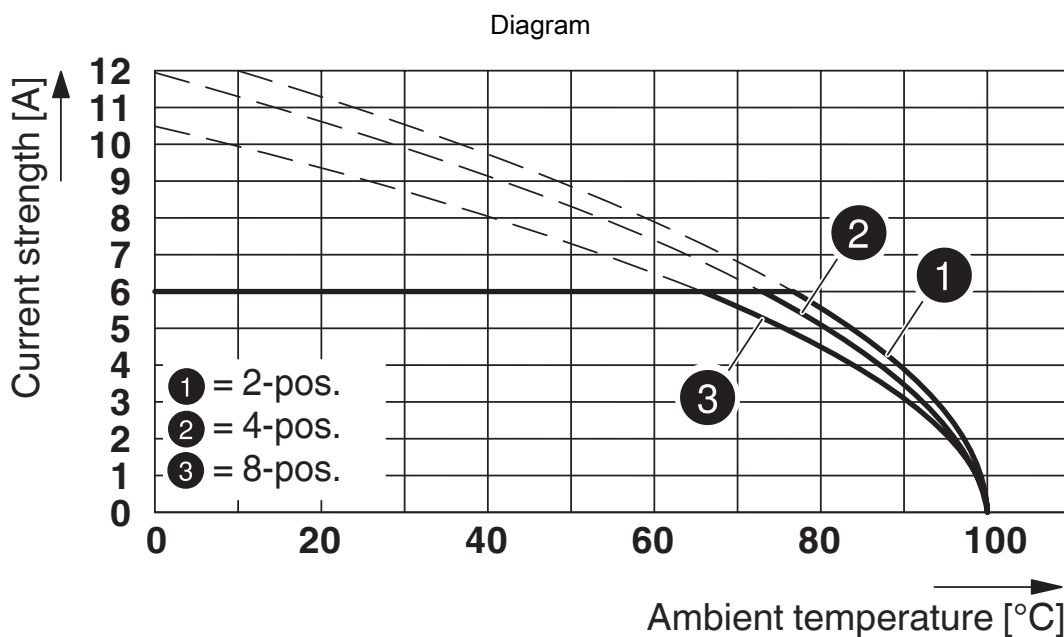
Diagram



Derating curve for: PTSM 0,5/...-P-2,5 with PTSM 0,5/...-HV-2,5-THR R...



Derating curve for: PTSM 0,5/..-P-2,5 with PTSM 0,5/..-HH-2,5-THR R..



Derating curve for: PTSM 0,5/..-P-2,5 with PTSM 0,5/..-HH-2,5-SMD R..

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1778858>

 <b>UL Recognized</b> Approval ID: E118976-20130619				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B				
	150 V	5 A	26 - 18	-

 <b>cULus Recognized</b> Approval ID: E60425-20101209				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B				
	150 V	5 A	26 - 20	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40048497				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	160 V	6 A	-	0.14 - 0.5

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

## Classifications

### ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

### ETIM

ETIM 10.0	EC002638
-----------	----------

### UNSPSC

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

# PTSM 0,5/ 4-P-2,5 - PCB connector



1778858

<https://www.phoenixcontact.com/us/products/1778858>

## 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%
-------------------------------------	----------------------------

### EF3.1 Climate Change

CO2e kg	0.02 kg CO2e
---------	--------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)