

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

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 connector, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Socket, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, 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: 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	1778890
Packing unit	100 pc
Minimum order quantity	100 pc
Sales Key	AAA
Product Key	AAAFPB
Catalog Page	Page 55 (C-1-2013)
GTIN	4046356530101
Weight per Piece (including packing)	2.179 g
Weight per Piece (excluding packing)	2.161 g
Customs tariff number	85366990
Country of origin	IN

1778890

<https://www.phoenixcontact.com/in/products/1778890>

## Technical Data

### Product properties

Type	Standard
Product line	COMBICON Connectors XS
Product type	PCB plug
Product family	PTSM 0,5/...-P
Number of positions	8
Pitch	2.5 mm
Number of connections	8
Number of rows	1
Mounting flange	without
Number of potentials	8

### Electrical properties

Nominal current $I_N$	6 A
Nominal voltage $U_N$	160 V
Degree of pollution	3
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>
Type of contact	Socket

#### Interlock

Locking type	without
Mounting flange	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/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

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

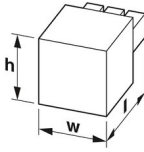
### Material data - housing

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

### Material data – actuating element

Color ()	()
----------	----

## Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	21.1 mm
Height [h]	5 mm
Length [l]	15 mm

## Mechanical tests

### Test for conductor damage and slackening

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

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## 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

Result	Test passed
No. of cycles	10
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	4 N

## Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

## 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

### 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)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## 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
Contact resistance R <sub>2</sub>	4 mΩ
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

## Ambient conditions

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

## 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 MΩ

### 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
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	0.8 mm
Rated insulation voltage (II/2)	320 V

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

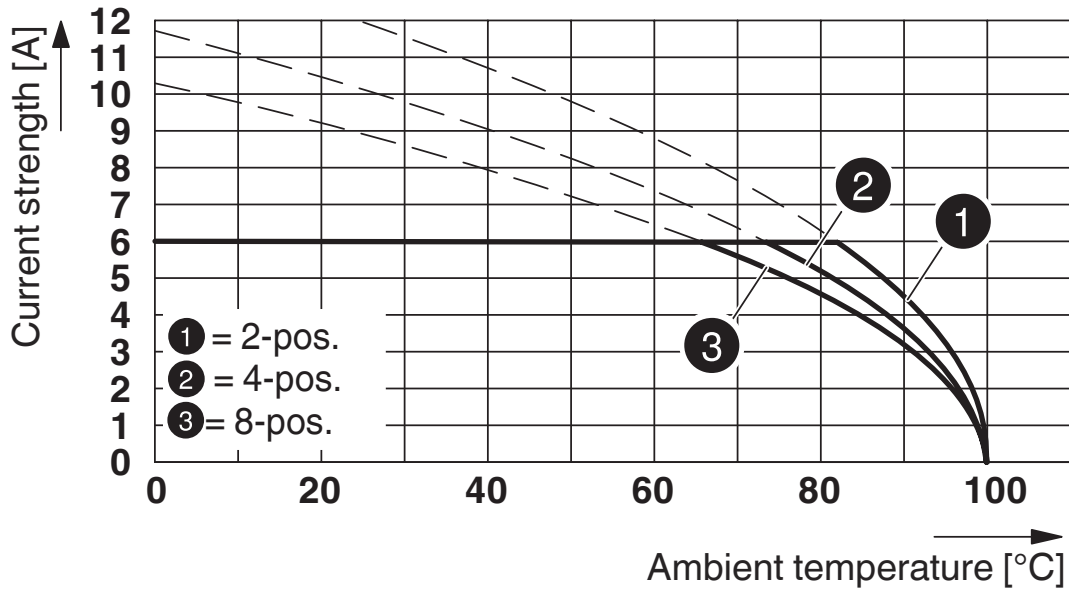
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	1.6 mm

## Packaging specifications

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

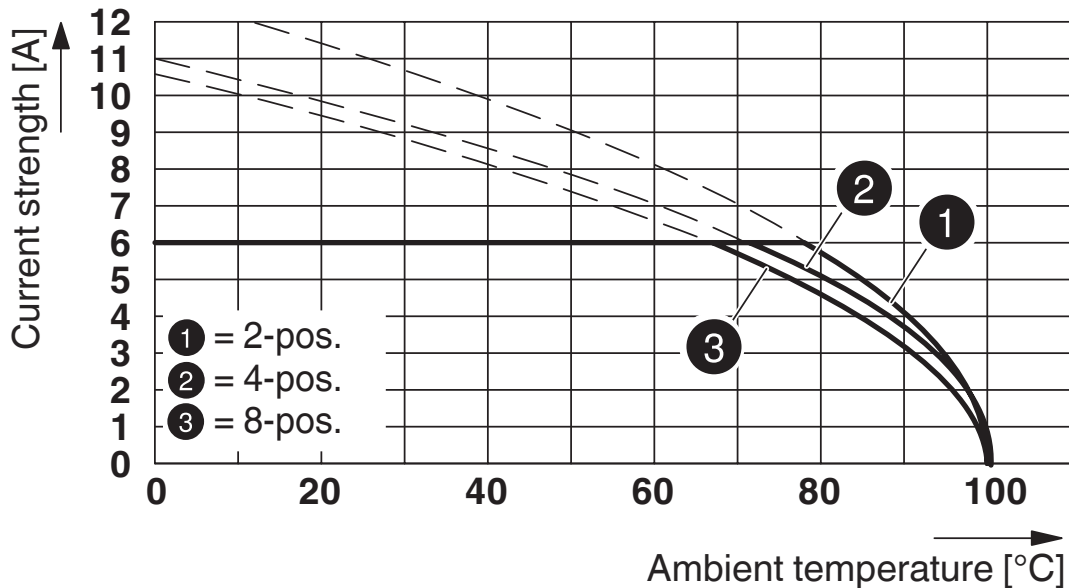
Drawings

Diagram



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

Diagram



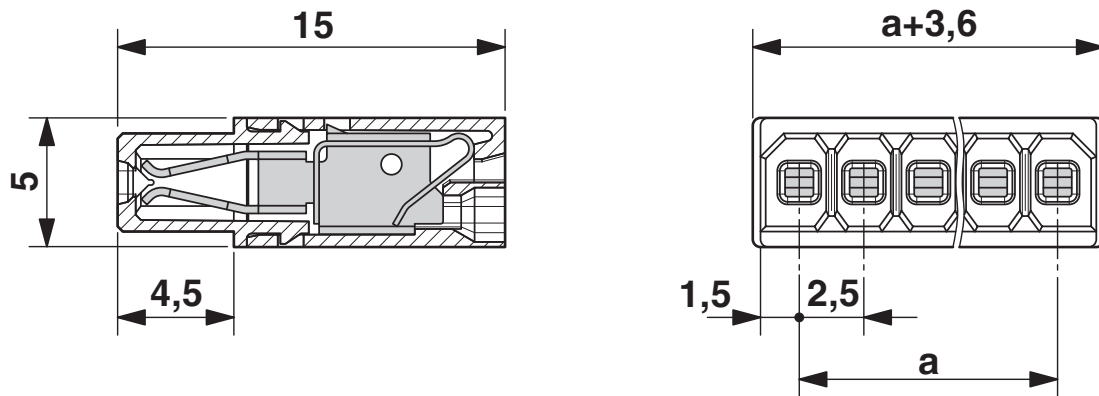
Derating curve for: PTSM 0,5/...-P-2,5 with PTSM 0,5/...-HH-2,5-THR R..

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector

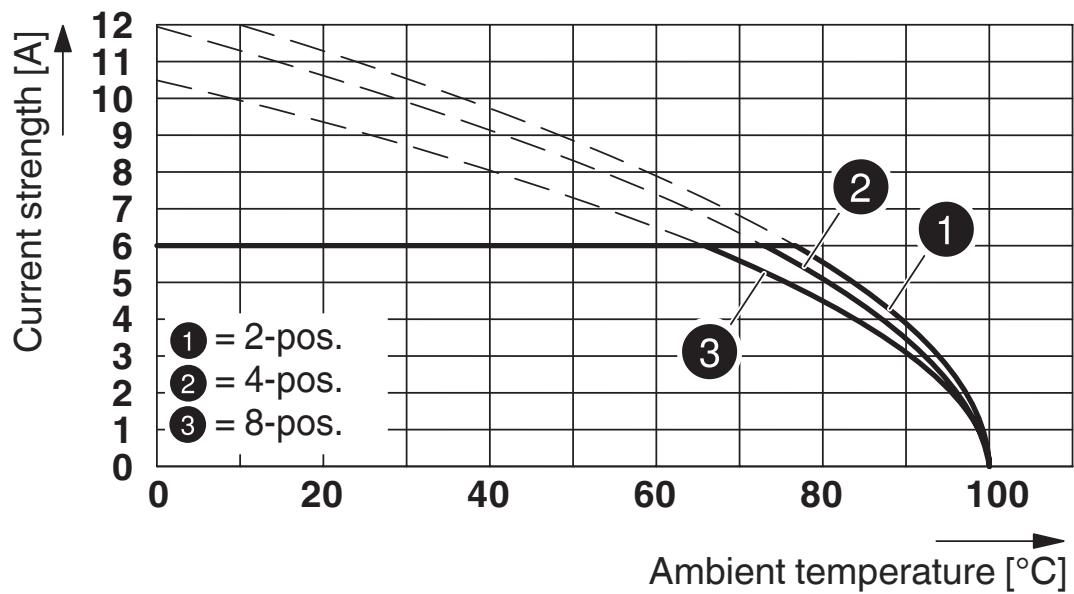
1778890

<https://www.phoenixcontact.com/in/products/1778890>

Dimensional drawing



Diagram



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



# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector




1778890

<https://www.phoenixcontact.com/in/products/1778890>

## Approvals

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

	<b>EAC</b> Approval ID: B.01687
---	------------------------------------

	<b>cULus Recognized</b> Approval ID: E60425-20101209			
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	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 $\text{mm}^2$
	160 V	6 A	-	0.14 - 0.5

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## Classifications

### ECLASS

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202

### ETIM

ETIM 8.0	EC002638
----------	----------

### UNSPSC

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

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## Environmental Product Compliance

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

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## Accessories

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

1205202

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



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

---

### AI 0,25- 6 BU - Ferrule

3203040

<https://www.phoenixcontact.com/in/products/3203040>



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

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## AI 0,25- 6 YE - Ferrule

3203024

<https://www.phoenixcontact.com/in/products/3203024>



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

---

## AI 0,34- 6 TQ - Ferrule

3203053

<https://www.phoenixcontact.com/in/products/3203053>



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

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## PTSM 0,5/ 8-HV-2,5-THR R44 - PCB header

1778612

<https://www.phoenixcontact.com/in/products/1778612>



PCB headers, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: PTSM 0,5/..-HV-THR, pitch: 2.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, number of solder pins per potential: 1, plug-in system: COMBICON PTSM, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 44 mm wide tape

## PTSM 0,5/ 8-HH-2,5-THR R44 - PCB header

1778683

<https://www.phoenixcontact.com/in/products/1778683>



PCB headers, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: PTSM 0,5/..-HH-THR, pitch: 2.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.1 mm, number of solder pins per potential: 1, plug-in system: COMBICON PTSM, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 44 mm wide tape

# PTSM 0,5/ 8-P-2,5 - Printed-circuit board connector



1778890

<https://www.phoenixcontact.com/in/products/1778890>

## PTSM 0,5/ 8-HH-2,5-SMD R44 - PCB header

1778829

<https://www.phoenixcontact.com/in/products/1778829>



PCB headers, nominal cross section: 0.5 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: PTSM 0,5/..-HH-SMD, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, number of solder pins per potential: 1, plug-in system: COMBICON PTSM, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 44 mm wide tape, Article with anti-rotation pin

---

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.

A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420

[info@phoenixcontact.co.in](mailto:info@phoenixcontact.co.in)