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

1778832

https://www.phoenixcontact.com/de/produkte/1778832

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PCB connector, nominal cross section: 0.5 mm^2, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, 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	1778832
Packing unit	250 pc
Minimum order quantity	250 pc
Sales Key	E1 - Leiterplattenanschl.
Product Key	AAAFPB
Catalog Page	Page 55 (C-1-2013)
GTIN	4046356530040
Weight per Piece (including packing)	0,598 g
Weight per Piece (excluding packing)	0,598 g
Customs tariff number	85366990
Country of origin	IN

Technical Data

Product properties

Type	Standard
Product line	COMBICON Connectors XS
Product type	PCB plug
Number of positions	2
Pitch	2.5 mm
Number of connections	2
Number of rows	1
Mounting flange	without
Number of potentials	2

Electrical properties

Nominal current I_N	6 A
Nominal voltage U_N	160 V
Pollution degree	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

Connection data

Connection technology

Type	Standard
Connector system	COMBICON PTSM
Nominal cross section	0.5 mm²
Type of contact	Female connector

Interlock

Locking type	without
Mounting flange	without

Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section solid	0.14 mm² ... 0.5 mm²
Conductor cross section flexible	0.2 mm² ... 0.5 mm² (up to 0.75 mm² 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
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 0.5 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 0.34 mm²

Cylindrical gauge a x b / diameter	- / 1.2 mm
Stripping length	6 mm

Material specifications

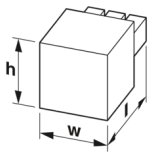
Material data - contact

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

Housing color	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]	6.1 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

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 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	0.5 mm² / solid / > 20 N
	0.75 mm² / 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 - 60.1 Hz)
Sweep speed	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R_1	3 mΩ
Contact resistance R_2	4 mΩ

Insertion/withdrawal cycles	10

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm^3 SO_2 on 300 dm^3/40 °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
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

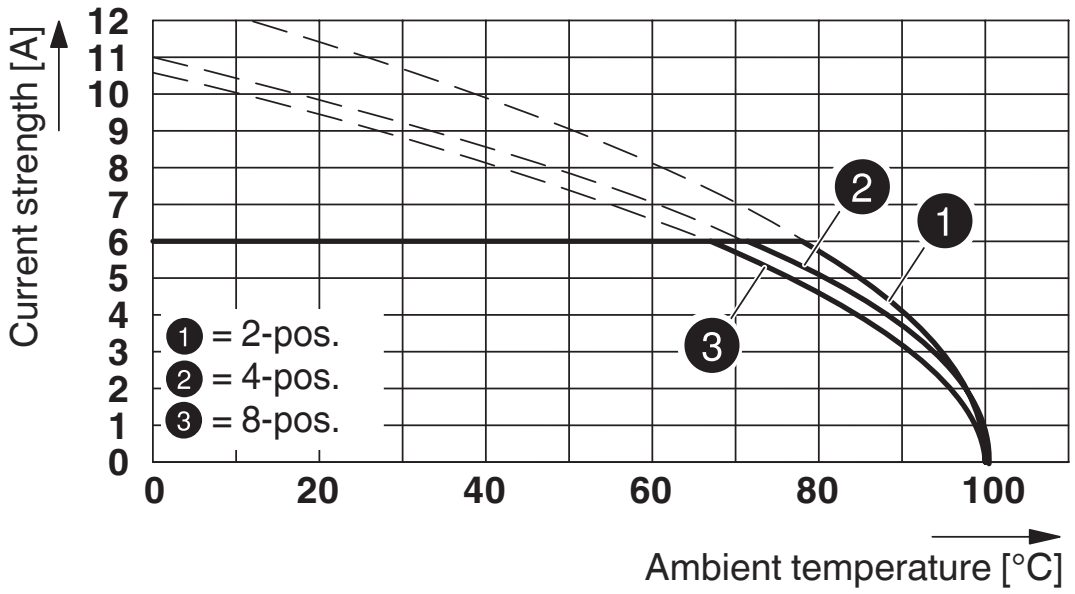
Packaging specifications

Type of packaging	packed in cardboard

Outer packaging type	Carton

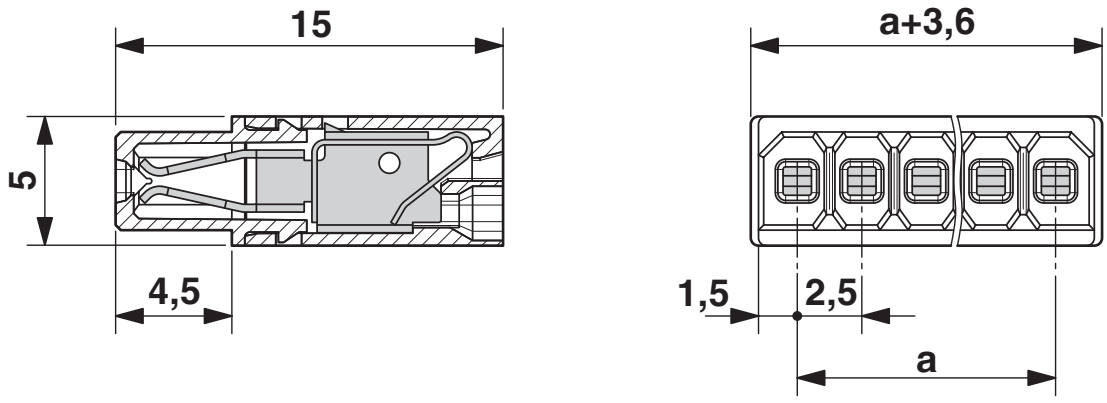
Drawings

Diagram

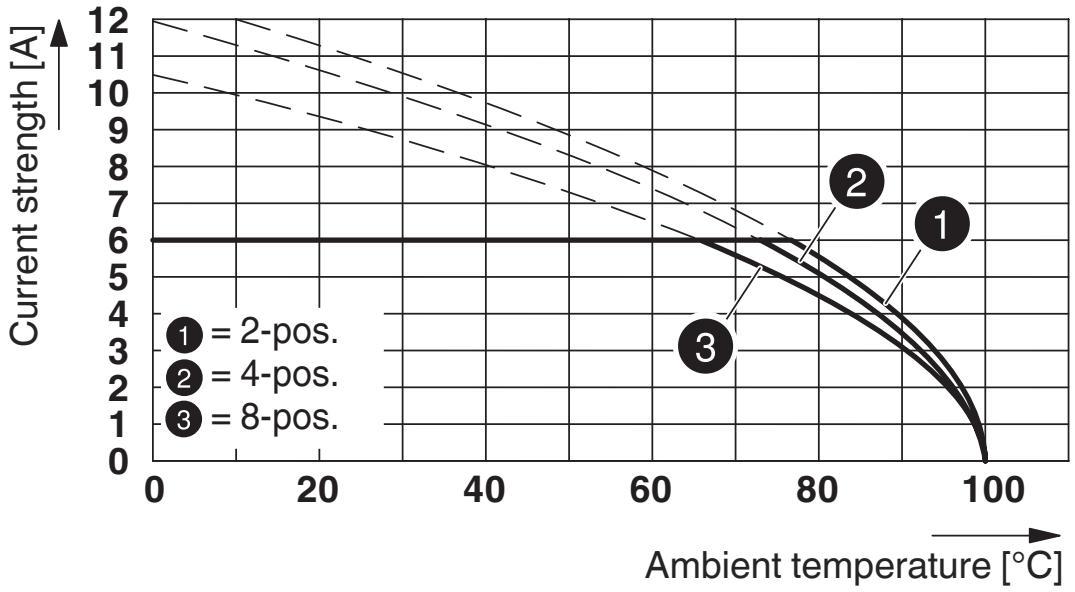


Derating curve for: PTSM 0,5/..-P-2,5 with PTSM 0,5/..-HH-2,5-THR R..

Dimensional drawing

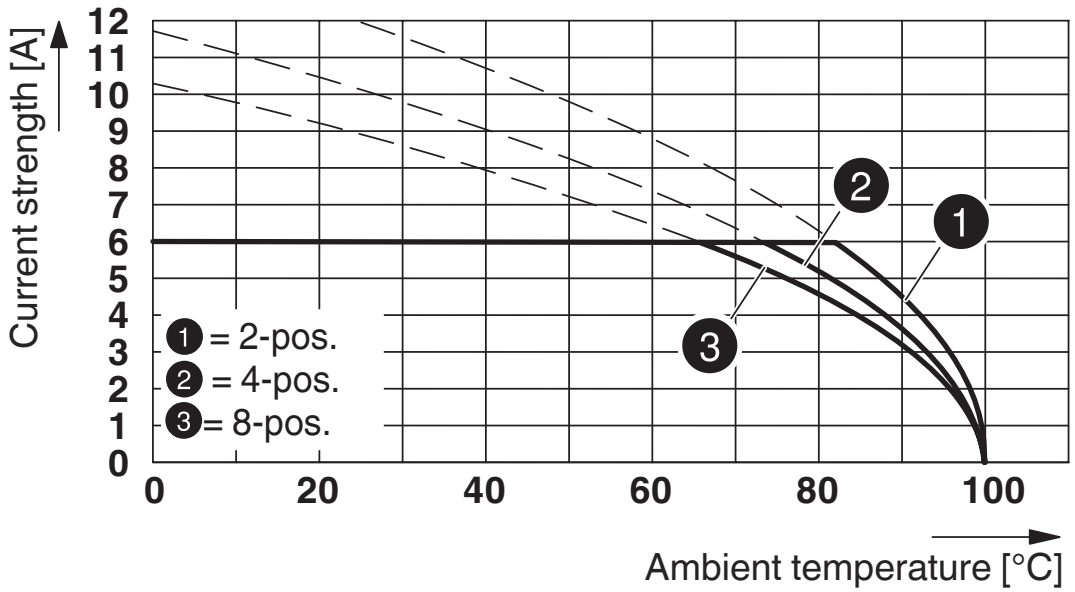


Diagram



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

Diagram



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

Approvals

UL Recognized
Approval ID: E118976-20130619

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	150 V	5 A	26 - 18	-

EAC
Approval ID: B.01687

cULus Recognized
Approval ID: E60425-20101209

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	150 V	5 A	26 - 20	-

VDE Zeichengenehmigung
Approval ID: 40048497

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	160 V	6 A	-	0.14 - 0.5

Classifications

ECLASS

ECLASS-9.0	27440309
ECLASS-10.0.1	27440309
ECLASS-11.0	27460202

ETIM

ETIM 8.0	EC002638

UNSPSC

UNSPSC 21.0	39121400

Environmental Product Compliance

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

Accessories

Screwdriver

Screwdriver - SZS 0,4X2,0 - 1205202

https://www.phoenixcontact.com/de/produkte/1205202

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

Ferrule

Ferrule - AI 0,25- 6 BU - 3203040

https://www.phoenixcontact.com/de/produkte/3203040

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

Ferrule

Ferrule - AI 0,25- 6 YE - 3203024

https://www.phoenixcontact.com/de/produkte/3203024

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

Ferrule

Ferrule - AI 0,34- 6 TQ - 3203053

https://www.phoenixcontact.com/de/produkte/3203053

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

PCB header

PCB header - PTSM 0,5/ 2-HV-2,5-THR R32 - 1778557

https://www.phoenixcontact.com/de/produkte/1778557

PCB headers, nominal cross section: 0.5 mm^2, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: PTSM 0,5/..-HV-THR, pitch: 2.5 mm, 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: 32 mm wide tape

PCB header

PCB header - PTSM 0,5/ 2-HH-2,5-THR R16 - 1778625

https://www.phoenixcontact.com/de/produkte/1778625

PCB headers, nominal cross section: 0.5 mm^2, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: PTSM 0,5/..-HH-THR, pitch: 2.5 mm, 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: 16 mm wide tape

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

1778832

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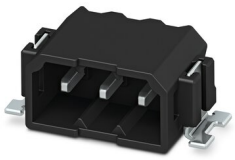
PCB header

PCB header - PTSM 0,5/ 2-HH-2,5-SMD R32 - 1778764

https://www.phoenixcontact.com/de/produkte/1778764



PCB headers, nominal cross section: 0.5 mm^2, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: PTSM 0,5/..-HH-SMD, pitch: 2.5 mm, pin layout: Linear pad geometry, number of solder pins per potential: 1, plug-in system: COMBICON PTSM, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 32 mm wide tape, Article with anti-rotation pin

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