

PTSM 0,5/ 3-PI-2,5 WH - PCB connector



1709451

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PCB connector, nominal cross section: 0.5 mm², color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PTSM 0,5/...-PI WH, 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

- 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
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections

Commercial data

Item number	1709451
Packing unit	250 pc
Minimum order quantity	250 pc
Sales key	AAA
Product key	AAAFPC
GTIN	4055626130361
Weight per piece (including packing)	0.852 g
Weight per piece (excluding packing)	0.844 g
Customs tariff number	85366990
Country of origin	PL

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Technical data

Product properties

Product type	PCB connector
Product family	PTSM 0,5/...-PI WH
Product line	COMBICON Connectors XS
Type	Inverted
Number of positions	3
Pitch	2.5 mm
Number of connections	3
Number of rows	1
Number of potentials	3

Electrical properties

Nominal current I_N	6 A
Nominal voltage U_N	160 V
Contact resistance	2.7 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	Inverted
Connector system	COMBICON PTSM
Nominal cross section	0.5 mm ²
Contact connection type	Pin

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 ² ... 0.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 0.5 mm ² (up to 0.75 mm ² 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 mm ² ... 0.5 mm ²

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Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 0.34 mm ² (possible from 0.14 mm ² , 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

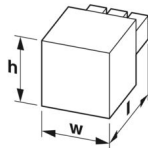
Material data - contact

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

Material data - housing

Color (Housing)	white (9010)
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]	9.2 mm
Height [h]	5 mm
Length [l]	15.5 mm

Mechanical tests

Conductor connection

Specification	IEC 60999-1:1999-11
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Result	Test passed
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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 ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	0.5 mm ² / solid / > 20 N
	0.75 mm ² / 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.	4 N
Withdraw strength per pos. approx.	2 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

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	50 m/s ² (60.1 Hz ... 150 Hz)

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Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R ₁	2.7 mΩ
Contact resistance R ₂	2.6 mΩ
Insertion/withdrawal cycles	10
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	ISO 22479:2019-05
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	1.39 kV

Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °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

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)	1.5 mm
Rated insulation voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV

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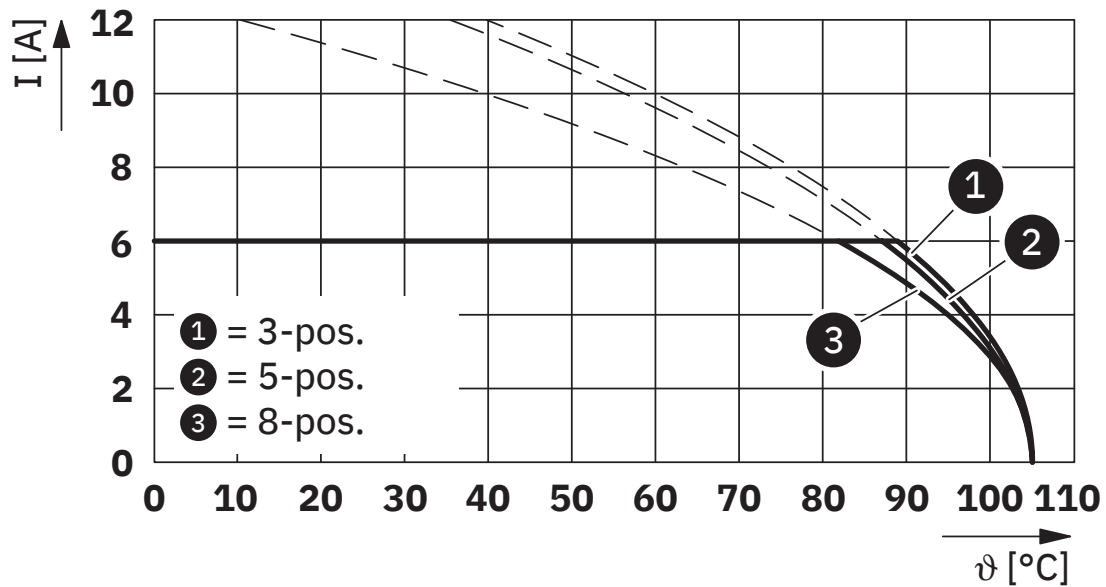
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	1.6 mm

Packaging specifications

Type of packaging	packed in cardboard
Outer packaging type	Carton

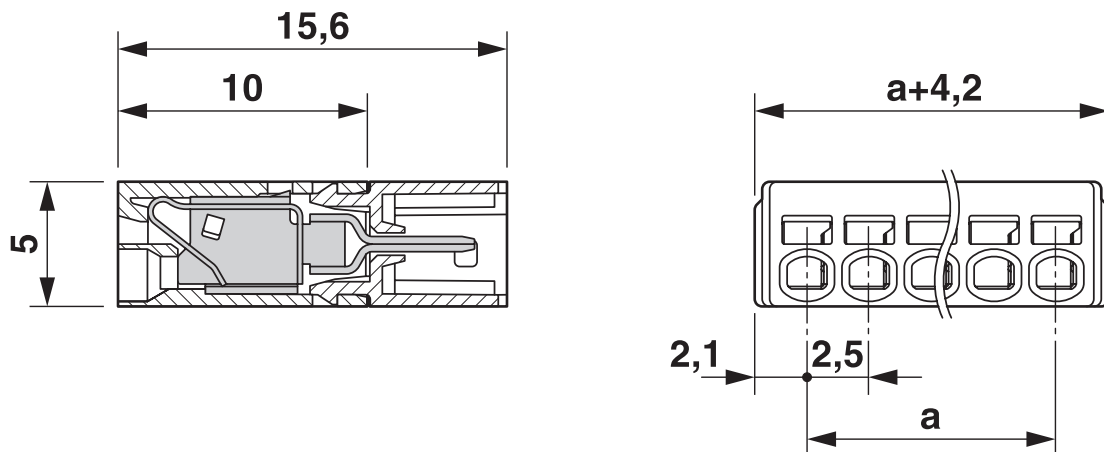
Drawings

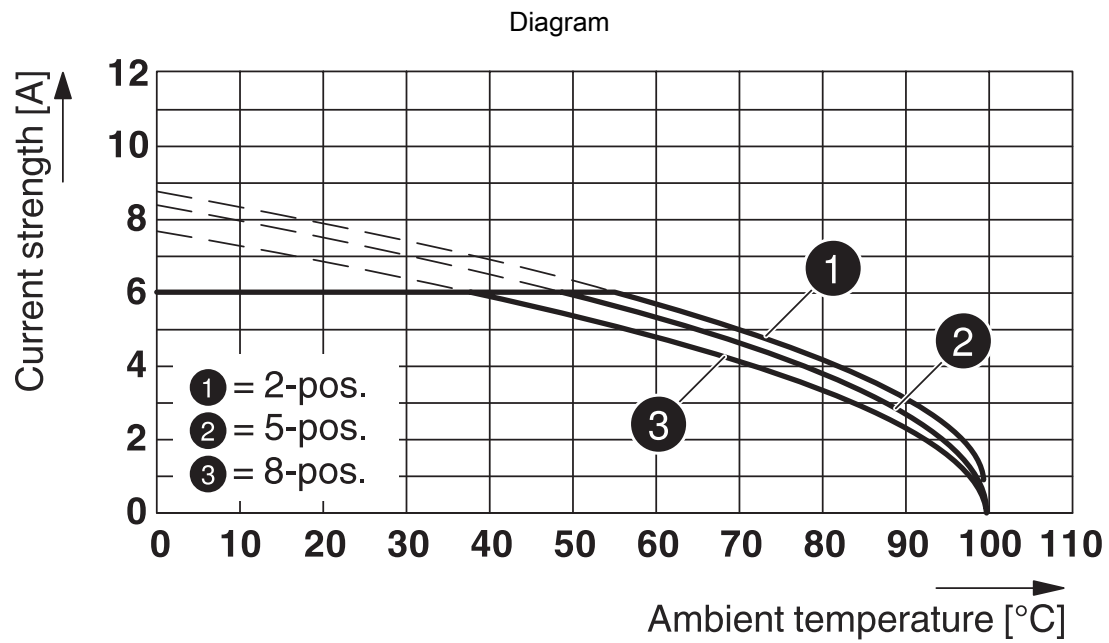
Diagram



Type: PTSM 0,5/...-PL-2,5 WH with PTSM 0,5/...-PI-2,5 WH

Dimensional drawing





Type: PTSM 0,5/...-PI-2,5 WH with PTSM 0,5/...-HHI0-2,5-SMD WHR...

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/1709451>

 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	-

 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 approval of drawings 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

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002638
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UNSPSC

UNSPSC 21.0	39121400
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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%

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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, Length contact range: 6 mm, sleeve length: 10.5 mm, color: blue

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AI 0,25- 6 YE - Ferrule

3203024

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Ferrule, Length contact range: 6 mm, sleeve length: 10.5 mm, color: yellow

AI 0,34- 6 TQ - Ferrule

3203053

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Ferrule, Length contact range: 6 mm, sleeve length: 10.5 mm, color: turquoise

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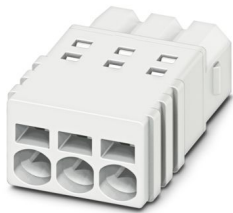
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PTSM 0,5/ 3-P-2,5 WH - PCB connector

1704854

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PCB connector, nominal cross section: 0.5 mm^2 , color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PTSM 0,5/...-P WH, 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

PTSM 0,5/ 3-HHI0-2,5-SMD WHR44 - PCB header

1815206

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PCB headers, nominal cross section: 0.5 mm^2 , color: signal white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PTSM 0,5/...-HHI-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, 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 method: without, type of packaging: 44 mm wide tape

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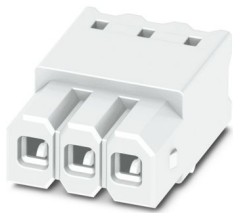
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PTSM 0,5/ 3-HHI-2,5-THR WH R32 - PCB header

1814993

<https://www.phoenixcontact.com/in/products/1814993>



PCB headers, nominal cross section: 0.5 mm², color: signal white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PTSM 0,5/...-HHI-THR WH, pitch: 2.5 mm, mounting: THR soldering / wave 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 method: without, type of packaging: 32 mm wide tape

PTSM 0,5/ 3-PL-2,5 WH - PCB connector

1709459

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PCB connector, nominal cross section: 0.5 mm², color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PTSM 0,5/...-PL WH, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PTSM, locking: Snap-in locking, mounting method: Latching flange, type of packaging: packed in cardboard

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SAMPLE PTSM 0,5 PI/PL-3 SET - Connector set

1714623

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Sample set, product range: SET

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