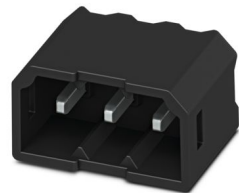


1814773

<https://www.phoenixcontact.com/us/products/1814773>

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PCB headers, nominal cross section: 0.5 mm², color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, 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, 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: 16 mm wide tape, Article with anti-rotation pin

Your advantages

- Designed for integration into the SMT soldering process
- Supplied in tape-on-reel packing according to IEC 60286-3 for automated mounting

Commercial data

Item number	1814773
Packing unit	500 pc
Minimum order quantity	500 pc
Sales key	AA01
Product key	AAATPB
GTIN	4046356760522
Weight per piece (including packing)	1.073 g
Weight per piece (excluding packing)	0.579 g
Customs tariff number	85366930
Country of origin	CN

Technical data

Product properties

Product type	PCB headers
Product family	PTSM 0,5/...-HH-THR
Product line	COMBICON Connectors XS
Type	Component suitable for through hole reflow
Number of positions	2
Pitch	2.5 mm
Number of connections	2
Number of rows	1
Number of potentials	2
Mounting flange	without
Pin layout	Linear pinning
Solder pins per potential	1

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)	50 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)	160 V
Rated surge voltage (II/2)	2.5 kV

Mounting

Mounting type	THR soldering
Pin layout	Linear pinning

Processing notes

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature T_c	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	Tin-plated

PTSM 0,5/ 2-HH1-2,5-THR R16 - PCB header



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Metal surface contact area (top layer)	Tin (3 - 5 µm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)

Material data - housing

Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	6.7 mm
Height [h]	7 mm
Length [l]	7.5 mm
Installed height	5 mm
Solder pin length [P]	2 mm
Pin dimensions	0.6 x 0.6 mm

PCB design

Hole diameter	1.1 mm
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Mechanical tests

Visual inspection

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

Dimension check

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

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Contact holder in insert

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

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

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	IIIa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	50 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)	1.9 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)	1.6 mm
Rated insulation voltage (II/2)	160 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

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)

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Test duration per axis	2.5 h
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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

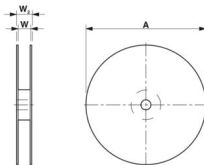
Climatic test

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

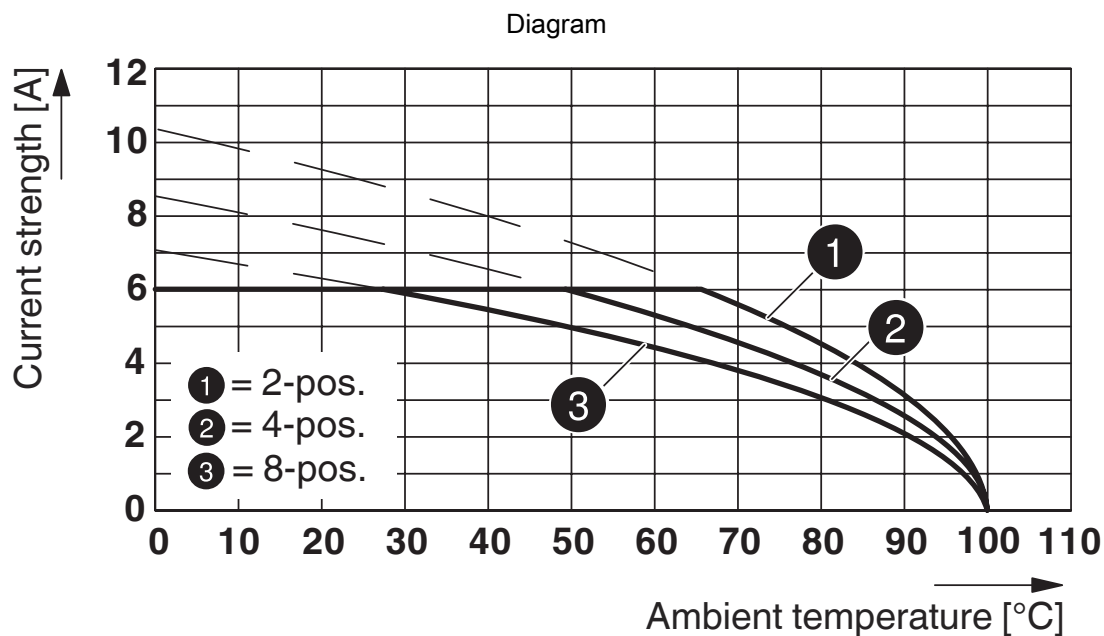
Ambient conditions

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

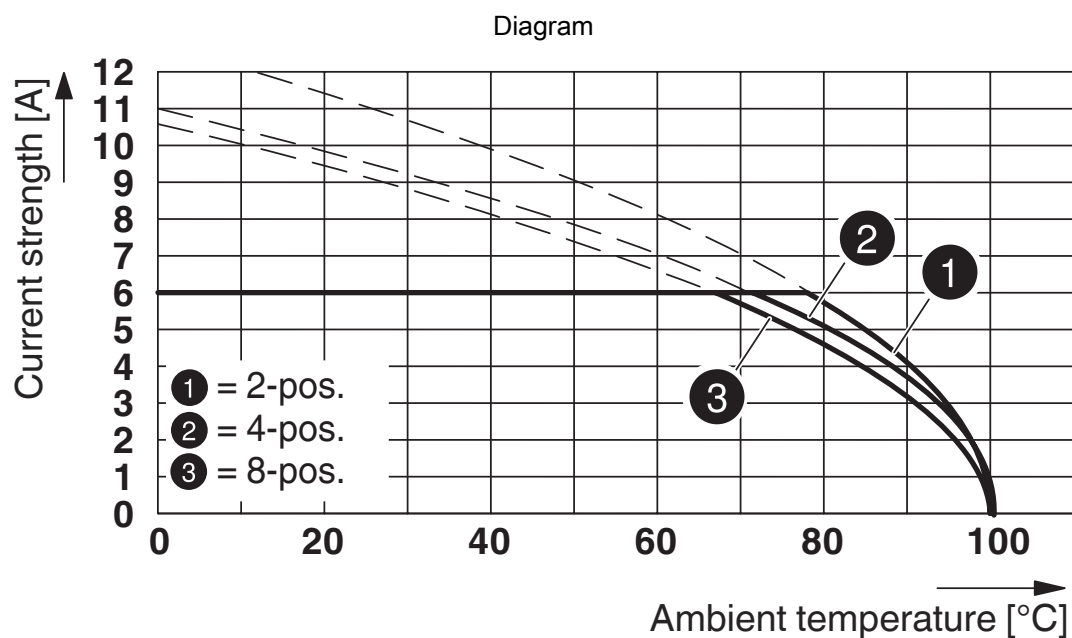
Packaging specifications

Dimensional drawing	
Type of packaging	16 mm wide tape
[W] tape width	16 mm
[W2] coil overall dimension	22.4 mm
[A] coil diameter	330 mm
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

Drawings



Type: PTSM 0,5/...-HH11-2,5-THR R... 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-THR R..

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1814773>

 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	-	-

 cULus Recognized Approval ID: E60425-20110108				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	150 V	6 A	-	-

PTSM 0,5/ 2-HH1-2,5-THR R16 - PCB header



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Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 9.0	EC002637
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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%

PTSM 0,5/ 2-HH1-2,5-THR R16 - PCB header



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Accessories

PTSM 0,5/ 2-P-2,5 - PCB connectors

1778832

<https://www.phoenixcontact.com/us/products/1778832>



PCB connector, nominal cross section: 0.5 mm^2 , color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, 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

PTSM 0,5/ 2-HHI-2,5-SMD R24 - PCB header

1810719

<https://www.phoenixcontact.com/us/products/1810719>



PCB headers, nominal cross section: 0.5 mm^2 , color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: PTSM 0,5/...-HHI-SMD, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pad geometry, 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: 24 mm wide tape, Article with anti-rotation pin

PTSM 0,5/ 2-HH1-2,5-THR R16 - PCB header



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<https://www.phoenixcontact.com/us/products/1814773>

CAC-PTCM1015464/D - Cable

1084514

<https://www.phoenixcontact.com/us/products/1084514>



Assembled PCB connector / Connecting cable with 2 printed circuit board connectors, rated current: 6 A, cable length: Free input (0.1 ... 3.0 m), Head 1: 2-position , pitch: 2.5 mm , Crimp connection , Socket, Color: white, Cable type: Individual litz wire, PVC, 22 AWG, white, Head 2: 2-position, pitch: 2.5 mm , Crimp connection , Socket, Color: white, Cable type: Individual litz wire, PVC, 20 AWG, white, Individual litz wire, PVC, 22 AWG, white

CAC-PTCM1015464/1015242 - Assembled PCB connectors

1084533

<https://www.phoenixcontact.com/us/products/1084533>



Assembled PCB connector / Connecting cable with 2 printed circuit board connectors, rated current: 6 A, cable length: Free input (0.1 ... 3.0 m), Head 1: 2-position , pitch: 2.5 mm , Crimp connection , Socket, Color: white, Cable type: Individual litz wire, PVC, 22 AWG, white, Head 2: 2-position, pitch: 2.5 mm , Crimp connection , Pin, Color: white, Cable type: Individual litz wire, PVC, 20 AWG, white, Individual litz wire, PVC, 22 AWG, white

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