

PTSM 0,5/ 2-HHI0-2,5-SMD WHR24 - PCB header



1815196

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PCB headers, nominal cross section: 0.5 mm², color: signal white, 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/..-HHI-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pinning, 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

Your advantages

- White design: Stable color when welding and during use
- Designed for integration into the SMT soldering process
- Supplied in tape-on-reel packing according to IEC 60286-3 for automated mounting
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections
- Additional solder anchors reduce the mechanical strain on the soldering spots

Commercial Data

Item number	1815196
Packing unit	500 pc
Minimum order quantity	500 pc
Sales Key	E1 - Leiterplattenanschl.
Product Key	AAAUSA
Catalog Page	Page 399 (C-1-2013)
GTIN	4046356761406
Weight per Piece (including packing)	1,476 g
Weight per Piece (excluding packing)	1,414 g
Customs tariff number	85366930
Country of origin	IN

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Technical Data

Product properties

Product line	COMBICON Connectors XS
Product type	PCB headers
Product family	PTSM 0,5/...-HHI-SMD WH
Number of positions	2
Pitch	2.5 mm
Number of connections	2
Number of rows	1
Mounting flange	without
Number of potentials	2
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	4.2 m Ω
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
	320 V
Rated surge voltage (II/2)	2.5 kV

Mounting

Mounting type	SMD soldering
Pin layout	Linear pinning

Processing notes

Process	Reflow 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
Metal surface contact area (top layer)	Tin (3 - 8 μ m Sn)

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Metal surface contact area (middle layer)	Nickel (1.3 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (3 - 8 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)

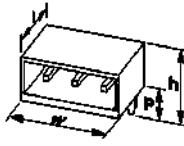
Material data - housing

Color (Housing)	signal white (9003)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Material data – actuating element

Color ()	()
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Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	9.8 mm
Height [h]	5 mm
Length [l]	14 mm
Installed height	5 mm

PCB design

Pad geometry	1.2 x 3.2 mm
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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 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	0.5 mm ² / solid / > 20 N
	0.5 mm ² / flexible / > 20 N
	0.75 mm ² / flexible / > 30 N

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Insertion and withdrawal forces

Result	Test passed
No. of cycles	10
Insertion strength per pos. approx.	3 N
Withdraw strength per pos. approx.	2 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

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)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm

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minimum creepage distance (III/3)	2 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
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)
Sweep speed	5g (60.1 Hz ... 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	4.2 m Ω
Contact resistance R_2	4.3 m Ω
Insertion/withdrawal cycles	10
Insulation resistance, neighboring positions	> 5 M Ω

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

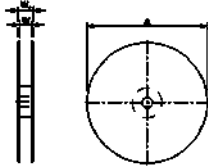
Packaging specifications

PTSM 0,5/ 2-HHI0-2,5-SMD WHR24 - PCB header



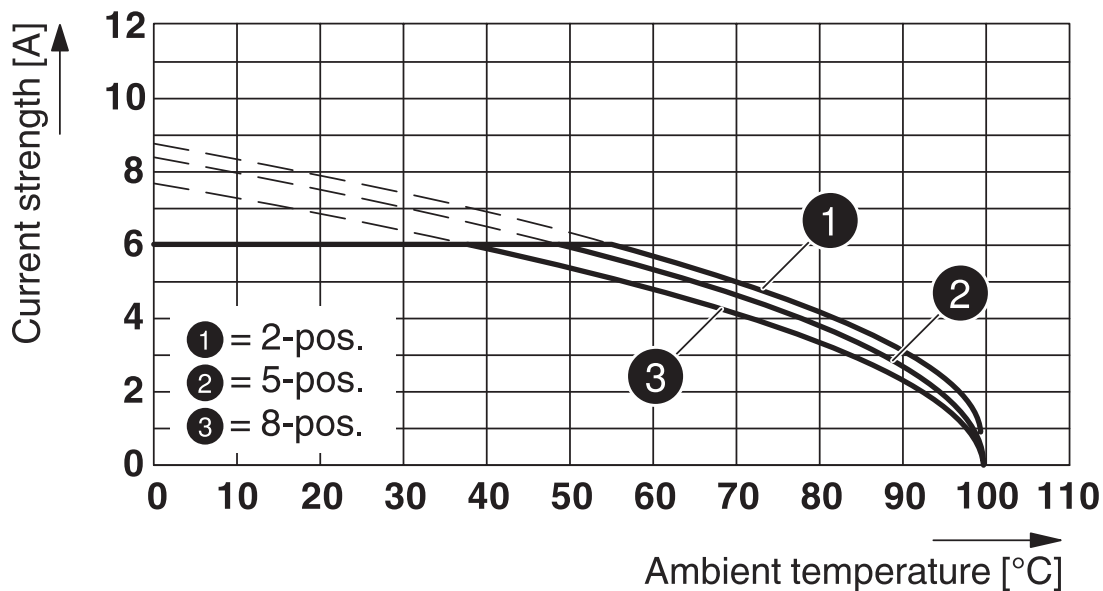
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Dimensional drawing	
Type of packaging	24 mm wide tape
[W] tape width	24 mm
[W2] coil overall dimension	30.4 mm
[A] coil diameter	330 mm
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

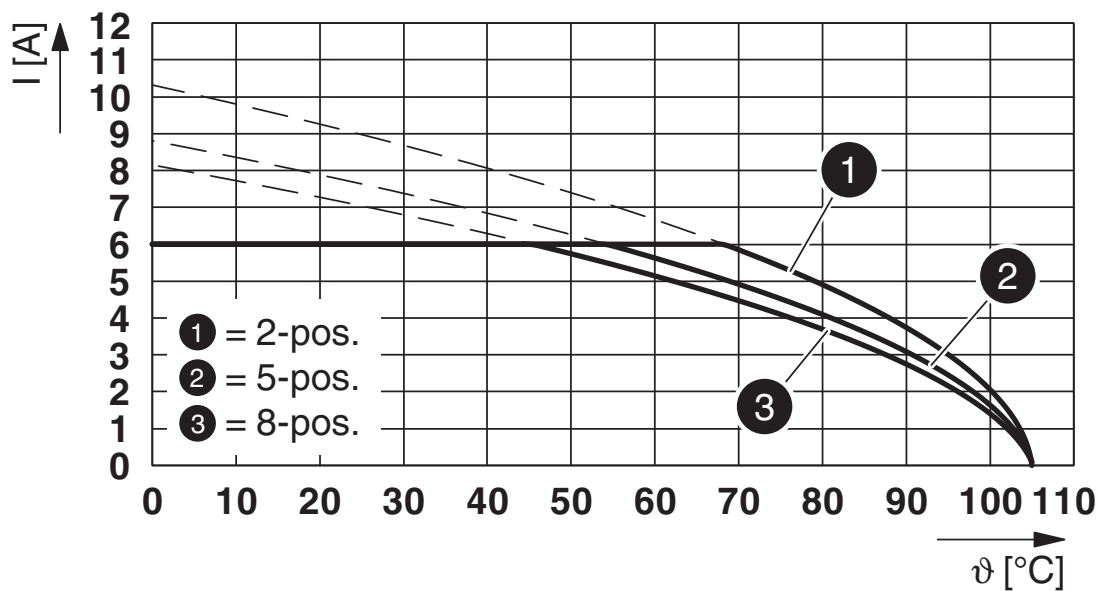
Drawings

Diagram



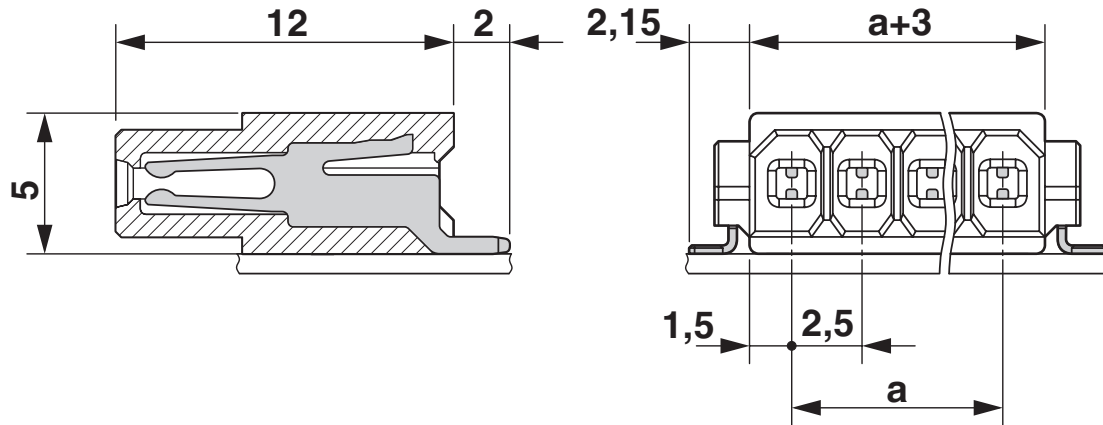
Type: PTSM 0,5/...-PI-2,5 WH with PTSM 0,5/...-HHI0-2,5-SMD WHR...

Diagram

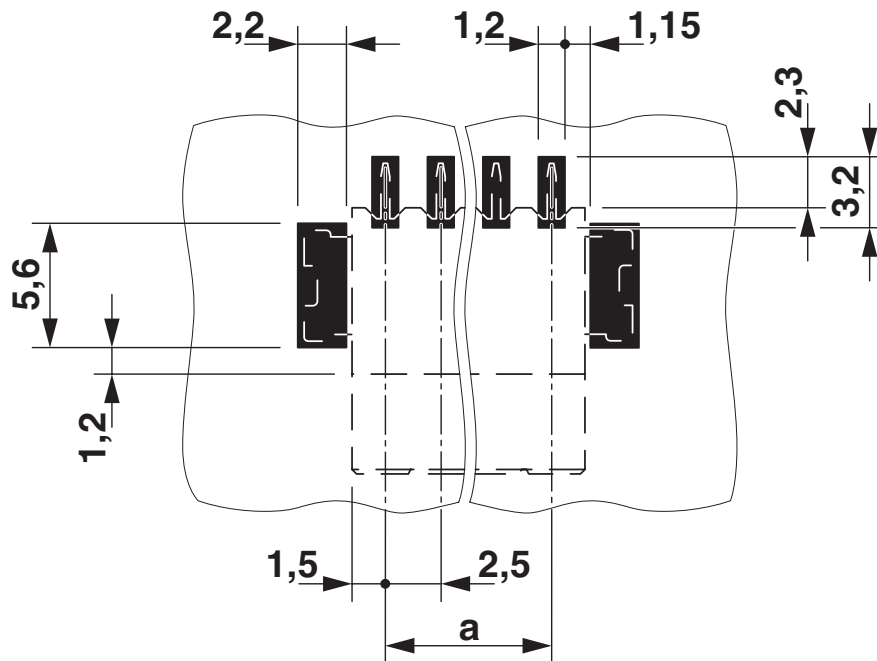


Type: PTCM 0,5/...-PI-2,5 WH with PTSM 0,5/...-HHI0-2,5-SMD WHR...

Dimensional drawing



Drilling plan/solder pad geometry




PTSM 0,5/ 2-HHI0-2,5-SMD WHR24 - PCB header




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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	-	-

 EAC Approval ID: B.01687				
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 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

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Classifications

ECLASS

ECLASS-9.0	27440402
ECLASS-10.0.1	27440402
ECLASS-11.0	27460201

ETIM

ETIM 8.0	EC002637
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UNSPSC

UNSPSC 21.0	39121400
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Environmental Product Compliance

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

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Accessories

SAMPLEPTSM 0,5/ 2-HHI0-2,5SMDWH - PCB header

1820783

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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: 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/...-HHI-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pinning, number of solder pins per potential: 1, plug-in system: COMBICON PTSM, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

PTSM 0,5/ 2-HH0-2,5-SMD WH R32 - PCB header

1814919

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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: 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 WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pinning, 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

PTSM 0,5/ 2-HHI0-2,5-SMD WHR24 - PCB header

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PTSM 0,5/ 2-HV-2,5-SMD WH R24 - PCB header

1778696

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PCB headers, nominal cross section: 0.5 mm², color: signal white, 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-SMD WH, 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: 24 mm wide tape, Article with anti-rotation pin

PTSM 0,5/ 2-HV0-2,5-SMD WH R24 - PCB header

1839198

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PCB headers, nominal cross section: 0.5 mm², color: signal white, 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-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pinning, 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

PTSM 0,5/ 2-HHI0-2,5-SMD WHR24 - PCB header

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PTSM 0,5/ 2-HTB-2,5-SMD WH R24 - PCB header

1830126

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PCB headers, nominal cross section: 0.5 mm², color: signal white, 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/..-HTB-SMD WH, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pinning, 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

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

1814841

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PCB headers, nominal cross section: 0.5 mm², color: signal white, 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 WH, 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: 16 mm wide tape

PTSM 0,5/ 2-HHI0-2,5-SMD WHR24 - PCB header

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

1815264

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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: 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 WH, 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: 32 mm wide tape

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

1778829

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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: 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

PTSM 0,5/ 2-HHI0-2,5-SMD WHR24 - PCB header



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

1708004

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PCB headers, nominal cross section: 0.5 mm², color: signal white, 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 WH, 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: 32 mm wide tape, Article with anti-rotation pin

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