

PTSM 0,5/ 6-HH-2,5-THR WH R32 - PCB header



1814883

<https://www.phoenixcontact.com/pc/products/1814883>

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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: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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: 32 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

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1814883 |
| Packing unit | 500 pc |
| Minimum order quantity | 500 pc |
| Product Key | AAATPA |
| Catalog Page | Page 397 (C-1-2013) |
| GTIN | 4046356760638 |
| Weight per Piece (including packing) | 1.582 g |
| Weight per Piece (excluding packing) | 0.795 g |
| Customs tariff number | 85366930 |
| Country of origin | CN |

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Technical Data

Product properties

| | |
|---------------------------|--|
| Type | Component suitable for through hole reflow |
| Product line | COMBICON Connectors XS |
| Product type | PCB headers |
| Product family | PTSM 0,5/...-HH-THR WH |
| Number of positions | 6 |
| Pitch | 2.5 mm |
| Number of connections | 6 |
| Number of rows | 1 |
| Mounting flange | without |
| Number of potentials | 6 |
| 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) | 125 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 |

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 |

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

Dimensions

| | |
|-----------------------|--------------|
| Dimensional drawing | |
| Pitch | 2.5 mm |
| Width [w] | 16.7 mm |
| Height [h] | 7 mm |
| Length [l] | 7.5 mm |
| Installed height | 5 mm |
| Solder pin length [P] | 2.1 mm |
| Pin dimensions | 0.6 x 0.6 mm |

PCB design

| | |
|---------------|---------|
| Pin spacing | 2.50 mm |
| Hole diameter | 1.1 mm |

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 |
|---------------|------------------------|

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| | |
|---|------------------------|
| Result | Test passed |
| 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 |

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) | 125 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) | 1.5 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 |
|---------------|-----------------------|

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| | |
|------------------------|-----------------------------|
| 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 | 3 mΩ |
| Contact resistance R ₂ | 4 mΩ |
| Insertion/withdrawal cycles | 10 |

Climatic test

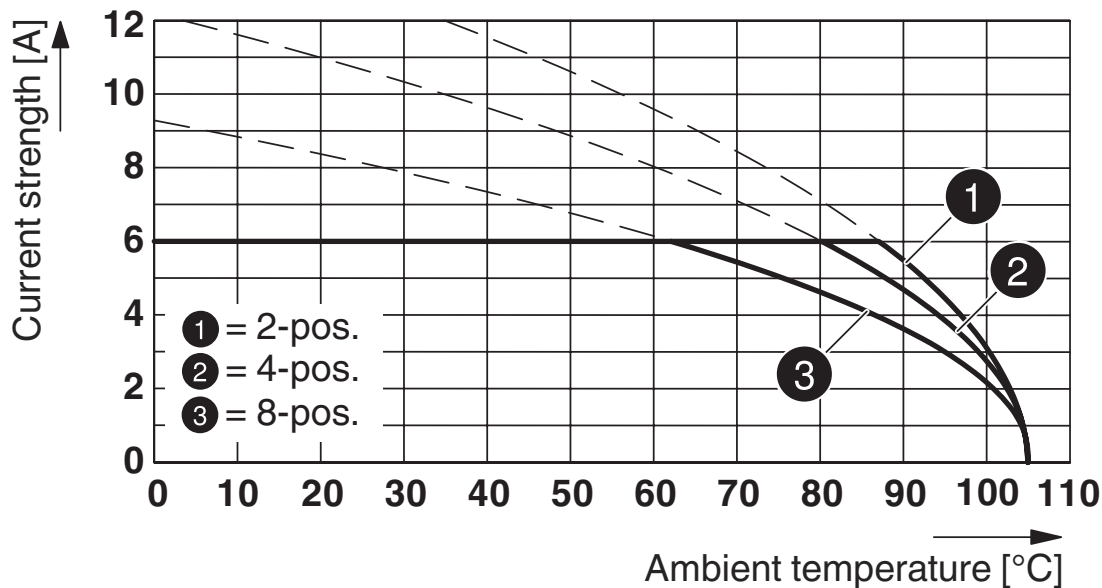
| | |
|-----------------------------------|---|
| Specification | ISO 6988:1985-02 |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Thermal stress | 100 °C/168 h |
| Power-frequency withstand voltage | 1.39 kV |

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 |

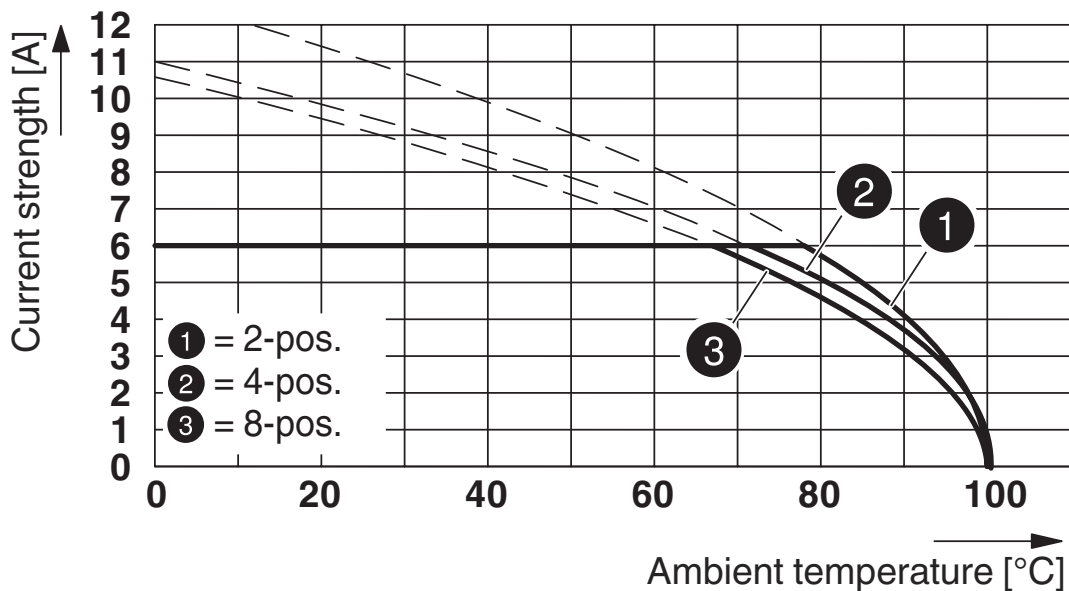
Drawings

Diagram

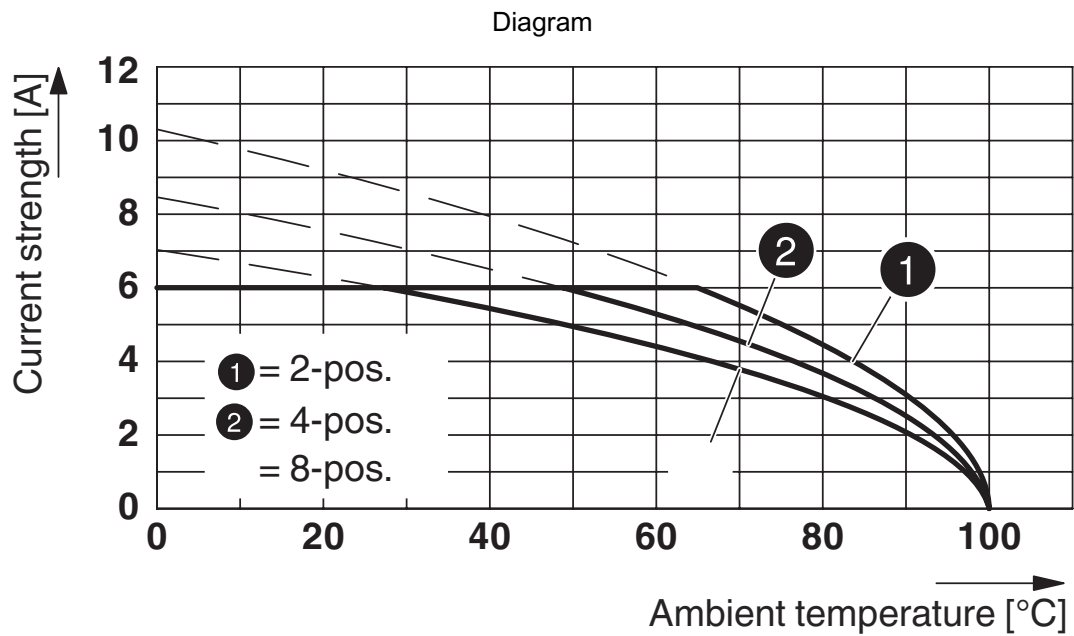


Type: PTCM 0,5/...-PL-2,5 WH with PTSM 0,5/...-HH-2,5-THR WH R...

Diagram

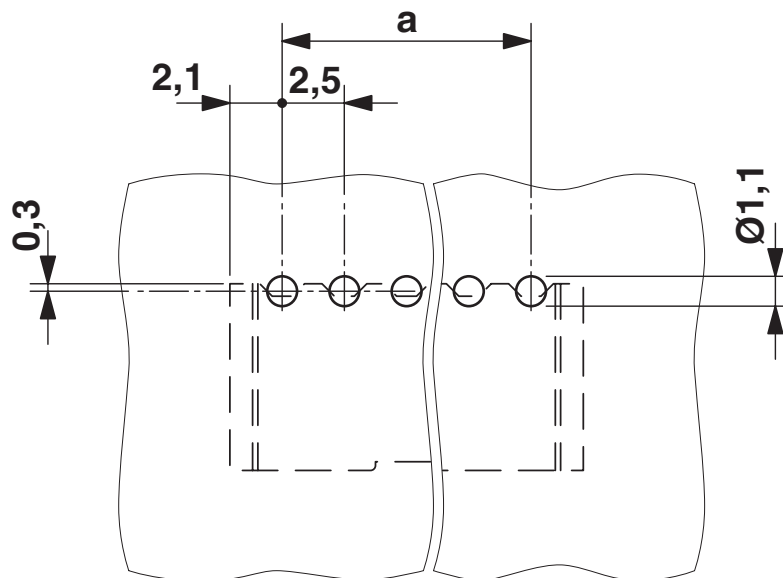


Type: PTSM 0,5/...-P-2,5 WH... with PTSM 0,5/...-HH-2,5-THR WH R...

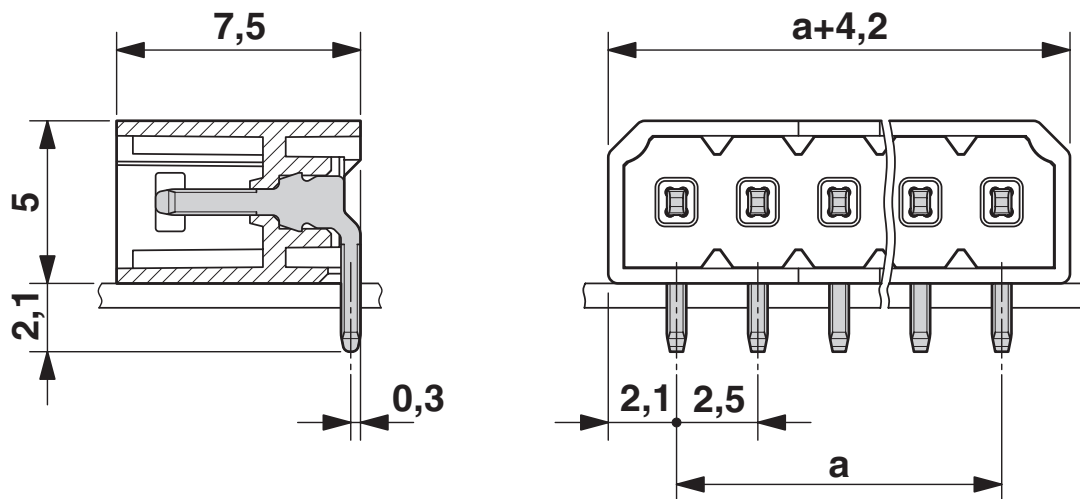


Type: PTSM 0,5/...-HHI-2,5-THR WH R... with PTSM 0,5/...-HH-2,5-THR WH R...

Drilling plan/solder pad geometry



Dimensional drawing



PTSM 0,5/ 6-HH-2,5-THR WH R32 - PCB header





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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1814883>

|  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 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  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 | - | - |

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

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 |

PTSM 0,5/ 6-HH-2,5-THR WH R32 - PCB header



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Accessories

SAMPLE PTSM 0,5/ 6-HH-2,5-THR - PCB header

1786015

<https://www.phoenixcontact.com/pc/products/1786015>



PCB headers, nominal cross section: 0.5 mm², color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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: packed in cardboard

PTSM 0,5/ 6-P-2,5 WH - PCB connector

1704859

<https://www.phoenixcontact.com/pc/products/1704859>



PCB connector, nominal cross section: 0.5 mm², color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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: without, type of packaging: packed in cardboard

PTSM 0,5/ 6-HH-2,5-THR WH R32 - PCB header



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PTSM 0,5/ 6-HHI-2,5-SMD WHR44 - PCB header

1707998

<https://www.phoenixcontact.com/pc/products/1707998>



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: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: PTSM 0,5/...-HHI-SMD WH, 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: 44 mm wide tape, Article with anti-rotation pin

PTSM 0,5/ 6-HHI0-2,5-SMD WHR44 - PCB header

1815235

<https://www.phoenixcontact.com/pc/products/1815235>



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: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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: 44 mm wide tape

PTSM 0,5/ 6-HH-2,5-THR WH R32 - PCB header



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PTSM 0,5/ 6-HHI-2,5-THR WH R32 - PCB header

1815028

<https://www.phoenixcontact.com/pc/products/1815028>



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: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: PTSM 0,5/...-HHI-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: 32 mm wide tape

PTSM 0,5/ 6-PL-2,5 WH - Printed-circuit board connector

1709463

<https://www.phoenixcontact.com/pc/products/1709463>



PCB connector, nominal cross section: 0.5 mm^2 , color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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: Self-locking flange, type of packaging: packed in cardboard

PTSM 0,5/ 6-HH-2,5-THR WH R32 - PCB header



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CAC-PTCM1015460/D - Cable

1084518

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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: 6-position , pitch: 2.5 mm , Crimp connection , Socket, Color: white, Cable type: Individual litz wire, PVC, 22 AWG, white, Head 2: 6-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-PTCM1015460/1015246 - Assembled PCB connectors

1084536

<https://www.phoenixcontact.com/pc/products/1084536>



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: 6-position , pitch: 2.5 mm , Crimp connection , Socket, Color: white, Cable type: Individual litz wire, PVC, 22 AWG, white, Head 2: 6-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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