

PTSM 0,5/ 8-HHI0-2,5-SMD R44 - PCB header



1815183

<https://www.phoenixcontact.com/us/products/1815183>

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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: Sn, contact connection type: Socket, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: PTSM 0,5/..-HHI-SMD, 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

Your advantages

- 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 | 1815183 |
| Packing unit | 500 pc |
| Minimum order quantity | 500 pc |
| Note | Made to order (non-returnable) |
| Sales key | AA01 |
| Product key | AAAUSB |
| GTIN | 4046356761390 |
| Weight per piece (including packing) | 2.22 g |
| Weight per piece (excluding packing) | 2.22 g |
| Customs tariff number | 85366930 |
| Country of origin | DE |

Technical data

Product properties

| | |
|---------------------------|------------------------|
| Product type | PCB headers |
| Product family | PTSM 0,5/...HHI-SMD |
| Product line | COMBICON Connectors XS |
| Number of positions | 8 |
| Pitch | 2.5 mm |
| Number of connections | 8 |
| Number of rows | 1 |
| Number of potentials | 8 |
| Mounting type | without |
| Pin layout | Linear pad geometry |
| Solder pins per potential | 1 |

Electrical properties

Properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 6 A |
| Nominal voltage U_N | 160 V |
| Contact resistance | 3.6 mΩ |
| Rated voltage (III/3) | 63 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) | 200 V |
| Rated surge voltage (II/2) | 2.5 kV |

Mounting

| | |
|---------------|---------------------|
| Mounting type | SMD soldering |
| Pin layout | Linear pad geometry |

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 |

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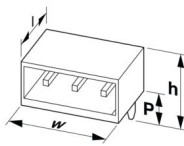
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| | |
|---|------------------------|
| Metal surface contact area (top layer) | Tin (3 - 8 µm Sn) |
| Metal surface contact area (middle layer) | Nickel (1.3 - 3 µm Ni) |
| Metal surface soldering area (top layer) | Tin (3 - 8 µm Sn) |
| Metal surface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

Material data - housing

| | |
|--|--------------|
| Color (Housing) | 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] | 24.8 mm |
| Height [h] | 5 mm |
| Length [l] | 14 mm |

PCB design

| | |
|--------------|--------------|
| Pad geometry | 1.2 x 3.2 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 |
| 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 | 25 |
| Insertion strength per pos. approx. | 4 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) | 63 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) | 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) | 1.6 mm |
| Rated insulation voltage (II/2) | 200 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) | 2 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) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

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Durability test

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 1.75 kV |
| Contact resistance R_1 | 3.6 mΩ |
| Contact resistance R_2 | 3.8 mΩ |
| Insertion/withdrawal cycles | 25 |
| Insulation resistance, neighboring positions | > 5 MΩ |

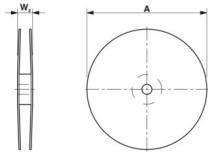
Climatic test

| | |
|-----------------------------------|---|
| 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 | 0.84 kV |

Ambient conditions

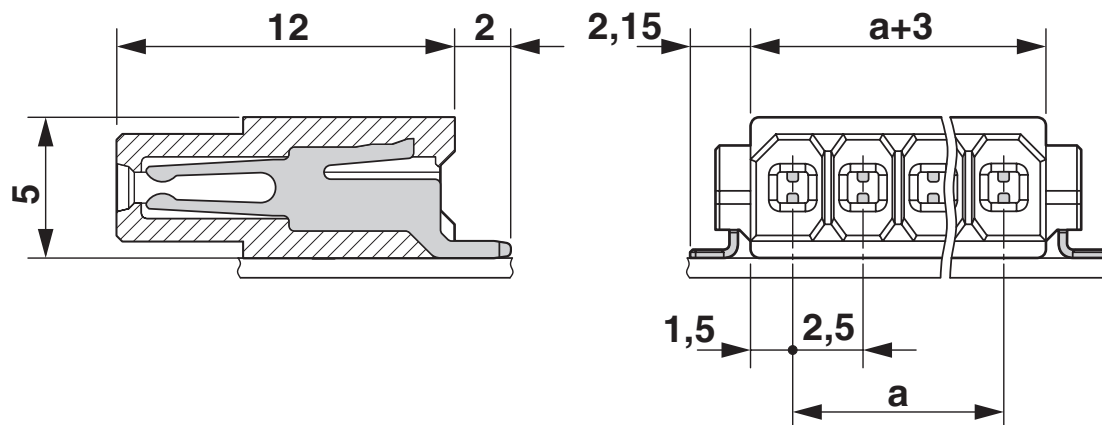
| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

Packaging specifications

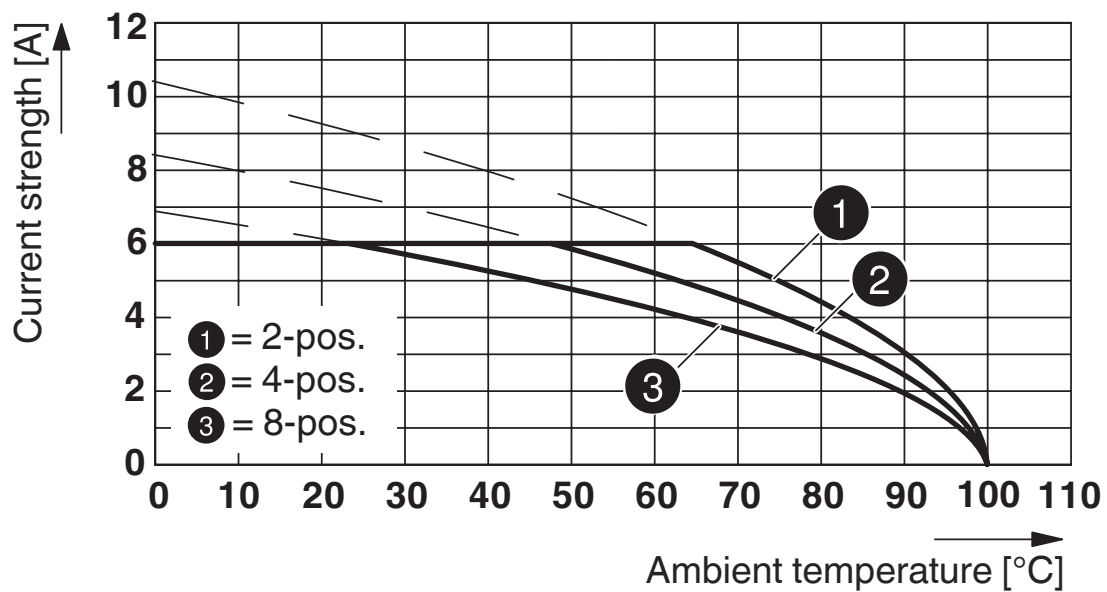
| | | |
|-----------------------------|--|--|
| Dimensional drawing |  | |
| Type of packaging | 44 mm wide tape | |
| [W] tape width | 44 mm | |
| [W2] coil overall dimension | ≤ 50.4 mm | |
| [A] coil diameter | ≤ 330 mm | |
| Outer packaging type | Transparent-Bag | |

Drawings

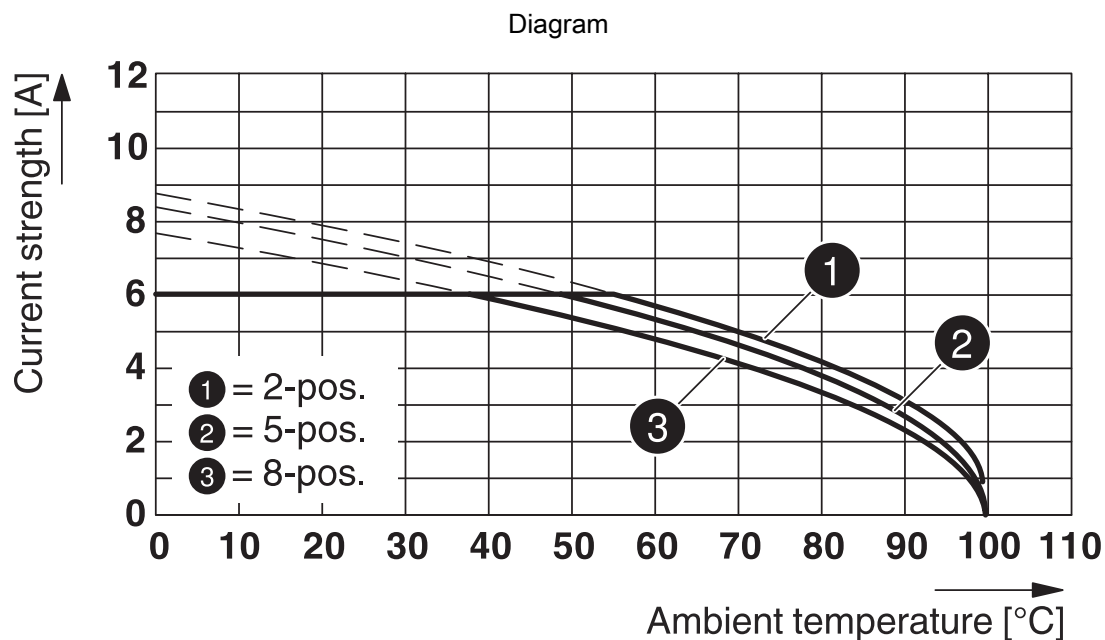
Dimensional drawing



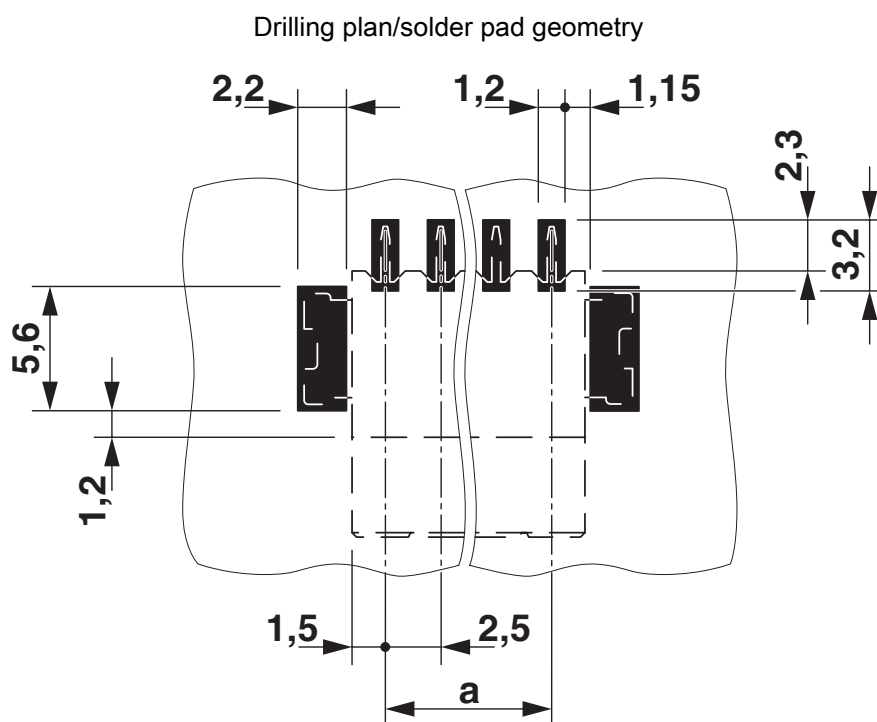
Diagram



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



Type: PTSM 0,5/...-PI-2,5 BK with PPTSM 0,5/...-HHI-2,5-SMD R...



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002637 |
|----------|----------|

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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