

2203903

https://www.phoenixcontact.com/us/products/2203903

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PCB headers, nominal cross section: 2.5 mm², color: light grey, nominal current: 16 A, rated voltage (III/2): 320 V, contact connection type: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: ICC..-H/..R5,0, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, Pin connector pattern alignment: Standard, locking: Snap-in locking, mounting: without, type of packaging: Box packaging, Product with pin output on right side

Your advantages

- Variable coding, for reliable protection against incorrect connection
- · Designed for integration into the wave soldering process
- · Easy and fast push-in mounting of assembled printed-circuit boards, thanks to stable guide rails
- · Quick and easily coded when initially connecting the connector and header

Commercial data

| Item number | 2203903 |
|--------------------------------------|---------------|
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | AC09 |
| Product key | ACHAFB |
| GTIN | 4055626466088 |
| Weight per piece (including packing) | 5.277 g |
| Weight per piece (excluding packing) | 5.24 g |
| Customs tariff number | 85366930 |
| Country of origin | PL |



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Technical data

Product properties

| Product type | PCB headers |
|---------------------------|---------------------------------|
| Product family | ICCH/R5,0 |
| Туре | Header perpendicular to the PCB |
| Number of positions | 4 |
| Pitch | 5 mm |
| Number of connections | 4 |
| Number of rows | 1 |
| Number of potentials | 4 |
| Mounting flange | without |
| Pin layout | Linear pinning |
| Solder pins per potential | 1 |

Electrical properties

| Nominal current I _N | 16 A |
|--------------------------------|-------|
| Nominal voltage U _N | 320 V |
| Degree of pollution | 3 |
| Rated voltage (III/3) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |

Mounting

| Mounting type | Wave soldering |
|---------------|----------------|
| Pin layout | Linear pinning |

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 terminal point (top layer) | Tin (2 - 4 µm Sn) |
| Metal surface terminal point (middle layer) | Nickel (1.3 - 3 μm Ni) |
| Metal surface contact area (top layer) | Tin (2 - 4 µm Sn) |
| Metal surface contact area (middle layer) | Nickel (1.3 - 3 μm Ni) |
| Metal surface soldering area (top layer) | Tin (2 - 4 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1.3 - 3 μm Ni) |

Material data - housing



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| Color (Housing) | light grey (7035) |
|---|-------------------|
| 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 |

Notes

| Assembly instruction: | Refer to the data sheet for the range in the download area. |
|-----------------------|---|
| General | Further information and detailed dimensions are available in the download area. |

Dimensions

| Dimensional drawing | P ₁ h |
|-----------------------|------------------|
| Pitch | 5 mm |
| Width [w] | 25 mm |
| Height [h] | 22.4 mm |
| Length [I] | 20.35 mm |
| Solder pin length [P] | 3.5 mm |
| Pin dimensions | 1 x 1 mm |
| PCB design | |
| Hole diameter | 1.4 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 |
| Polarization and coding | |
| Specification | IEC 60512-13-5:2006-02 |
| Result | Test passed |

Contact holder in insert



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| 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 | Test passed 25 |
| | |

Electrical tests

Thermal test | Test group C

| Specification | IEC 60512-5-1:2002-02 |
|----------------------------|-----------------------|
| Tested number of positions | 4 |

Insulation resistance

| Specification | IEC 60512-3-1:2002-02 |
|--|-----------------------|
| Insulation resistance, neighboring positions | > 30 GΩ |

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) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum creepage distance (III/3) | 3.2 mm |
| Rated insulation voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| minimum clearance value - non-homogenous field (III/2) | 3 mm |
| minimum creepage distance (III/2) | 1.6 mm |
| Rated insulation voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |
| minimum clearance value - non-homogenous field (II/2) | 3 mm |
| minimum creepage distance (II/2) | 3.2 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 |



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Durability test

| Specification | IEC 60512-9-1:2010-03 |
|--|---|
| Insulation resistance, neighboring positions | > 30 GΩ |
| imatic test | |
| Specification | ISO 6988:1985-02 |
| 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 | 2.21 kV |
| mbient conditions | |
| | -40 °C 105 °C (dependent on the derating curve) |
| Ambient temperature (operation) | -40 C 103 C (dependent on the defating curve) |
| Ambient temperature (operation) Ambient temperature (storage/transport) | -40 °C 55 °C |
| , , | , , |

Box packaging

Carton

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Type of packaging

Outer packaging type