

1524100

https://www.phoenixcontact.com/us/products/1524100

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PCB headers, color: black, nominal current: 8 A, rated voltage (III/2): 150 V, contact surface: Sn, contact connection type: Pin, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: ICC..-H/..R3,5, pitch: 3.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 2.8 mm, number of solder pins per potential: 1, plug-in system: ICC 1,5, Pin connector pattern alignment: Standard, locking: Snap-in locking, mounting method: 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                          | 1524100       |
|--------------------------------------|---------------|
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | AC09          |
| Product key                          | ACHAFB        |
| GTIN                                 | 4063151990756 |
| Weight per piece (including packing) | 4.74 g        |
| Weight per piece (excluding packing) | 3.37 g        |
| Customs tariff number                | 85366930      |
| Country of origin                    | PL            |



https://www.phoenixcontact.com/us/products/1524100



# Technical data

# Product properties

| Product type              | PCB headers    |
|---------------------------|----------------|
| Product family            | ICCH/R3,5      |
| Number of positions       | 5              |
| Pitch                     | 3.5 mm         |
| Number of connections     | 5              |
| Number of rows            | 1              |
| Number of potentials      | 5              |
| Pin layout                | Linear pinning |
| Solder pins per potential | 1              |

# Electrical properties

#### **Properties**

| Nominal current I <sub>N</sub> | 8 A                   |
|--------------------------------|-----------------------|
| Contact resistance             | $1.76~\text{m}\Omega$ |
| Rated voltage (III/3)          | 150 V                 |
| Rated surge voltage (III/3)    | 2.5 kV                |
| Rated voltage (III/2)          | 150 V                 |
| Rated surge voltage (III/2)    | 2.5 kV                |
| Rated voltage (II/2)           | 250 V                 |
| Rated surge voltage (II/2)     | 2.5 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

| Material data Housing |              |  |
|-----------------------|--------------|--|
| Color (Housing)       | black (9005) |  |



1524100

https://www.phoenixcontact.com/us/products/1524100

| 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 note | Please observe the application note in the download area.                       |
|---------------|---|
| General       | Further information and detailed dimensions are available in the download area. |

#### **Dimensions**

| Dimensional drawing   | P <sub>Y</sub> h |
|-----------------------|------------------|
| Pitch                 | 3.5 mm           |
| Width [w]             | 25 mm            |
| Height [h]            | 22.4 mm          |
| Length [I]            | 20.22 mm         |
| Solder pin length [P] | 2.8 mm           |
| Pin dimensions        | 0.8 x 0.8 mm     |
| PCB design            |                  |
| Hole diameter         | 1.2 mm           |

#### Mechanical tests

Polarization and coding Specification

| 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            |
|                            |                        |

IEC 60512-13-5:2006-02



**DPHŒNIX CONTACT** 

https://www.phoenixcontact.com/us/products/1524100

| Result   | Test passed            |
|--|------------------------|
| Contact holder in insert                       |                        |
| Specification                                  | IEC 60512-15-1:2008-05 |
| Contact holder in insert<br>Requirements >20 N | Test passed            |
| Insertion and withdrawal forces                |                        |
| Result   | Test passed            |
| No. of cycles                                  | 25                     |
| Insertion strength per pos. approx.            | 7.2 N                  |
| Withdraw strength per pos. approx.             | 5.4 N                  |

#### Electrical tests

1524100

| Thermal | test | l Test | aroup | С |
|---------|------|--------|-------|---|
|         |      |        |       |   |

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

#### Insulation resistance

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

### Air clearances and creepage distances |

| Insulating material group        | 1      |
|----------------------------------|--------|
| Rated insulation voltage (III/3) | 150 V  |
| Rated surge voltage (III/3)      | 2.5 kV |
| Rated insulation voltage (III/2) | 150 V  |
| Rated surge voltage (III/2)      | 2.5 kV |
| Rated insulation voltage (II/2)  | 250 V  |
| Rated surge voltage (II/2)       | 2.5 kV |

### 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       |

### Durability test

| Specification                          | IEC 60512-9-1:2010-03 |
|--|-----------------------|
| Impulse withstand voltage at sea level | 2.95 kV               |
| Contact resistance R <sub>1</sub>      | 1.76 mΩ               |
| Contact resistance R <sub>2</sub>      | 1.82 mΩ               |



1524100

https://www.phoenixcontact.com/us/products/1524100

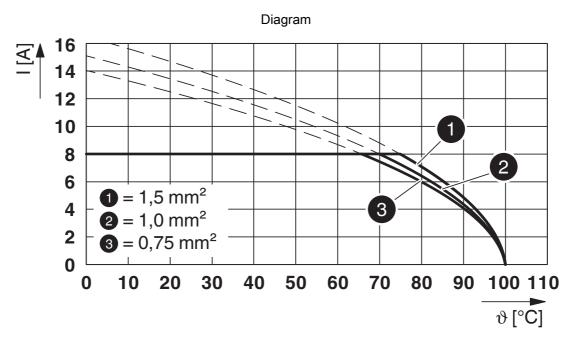
| Insertion/withdrawal cycles  | 25   |
|--|--|
| Insulation resistance, neighboring positions                                   | > 3 TΩ   |
| limatic test   |  |
| ilmatic test   |  |
| Specification  | ISO 6988:1985-02   |
| Corrosive stress   | $0.2~\mathrm{dm^3SO_2}$ on 300 $\mathrm{dm^3/40~^\circ C/1}$ cycle |
| Thermal stress   | 100 °C/168 h   |
| Power-frequency withstand voltage  | 1.54 kV  |
| mbient conditions  Ambient temperature (operation)                             | -40 °C 105 °C (dependent on the derating curve)                    |
|  |  |
| Ambient temperature (storage/transport)  | -40 °C 55 °C   |
| Ambient temperature (storage/transport)  Relative humidity (storage/transport) | -40 °C 55 °C<br>30 % 70 %  |
| , , ,  |  |
| Relative humidity (storage/transport)  | 30 % 70 %  |
| Relative humidity (storage/transport)  | 30 % 70 %  |
| Relative humidity (storage/transport)  Ambient temperature (assembly)          | 30 % 70 %  |



https://www.phoenixcontact.com/us/products/1524100



# Drawings



Type: ICC20(25)-PSC1,5/...-3,5-... with ICC20(25)-H/...L(R)3,5-...



1524100

https://www.phoenixcontact.com/us/products/1524100

# Classifications

ETIM 9.0

### **ECLASS**

|    | ECLASS-13.0 | 27460201 |
|----|-------------|----------|
|    | ECLASS-15.0 | 27460201 |
| ΕT | TIM         |          |

EC002637



1524100

https://www.phoenixcontact.com/us/products/1524100

# Environmental product compliance

#### EU RoHS

| 20 None                                 |  |
|---|--|
| 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%               |

Phoenix Contact 2025 @ - all rights reserved https://www.phoenixcontact.com

Phoenix Contact USA 586 Fulling Mill Road Middletown, PA 17057, United States (+717) 944-1300 info@phoenixcon.com