

# ICC20-H/4R3,5-7035 - PCB header

1084012

<https://www.phoenixcontact.com/us/products/1084012>



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PCB headers, color: light gray, nominal current: 8 A, rated voltage (III/2): 150 V, contact surface: Sn, contact connection type: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: ICC..-H/..R3,5, pitch: 3.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.65 mm, number of solder pins per potential: 1, plug-in system: ICC 1,5, 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	1084012
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AC09
Product key	ACHAFB
GTIN	4055626820828
Weight per piece (including packing)	3.903 g
Weight per piece (excluding packing)	2.56 g
Customs tariff number	85366930
Country of origin	PL

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## Technical data

### Product properties

Product type	PCB headers
Product family	ICC..-H/..R3,5
Type	Header perpendicular to the PCB
Number of positions	4
Pitch	3.5 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Pin layout	Linear pinning
Solder pins per potential	1

### Data management status

Article revision	02
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### Electrical properties

Nominal current $I_N$	8 A
Contact resistance	1.76 mΩ
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)

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## Material data - housing

Color (Housing)	light gray (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 note	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	
Pitch	3.5 mm
Width [w]	20 mm
Height [h]	22.4 mm
Length [l]	20.22 mm
Solder pin length [P]	3.65 mm
Pin dimensions	0.8 x 0.8 mm

## PCB design

Hole diameter	1.2 mm
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## 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

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## 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.	7.2 N
Withdraw strength per pos. approx.	5.4 N

## Electrical tests

### Thermal test | Test group C

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	I
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
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Impulse withstand voltage at sea level	2.95 kV
Contact resistance $R_1$	1.76 m $\Omega$
Contact resistance $R_2$	1.82 m $\Omega$
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 3 T $\Omega$

## Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	1.54 kV

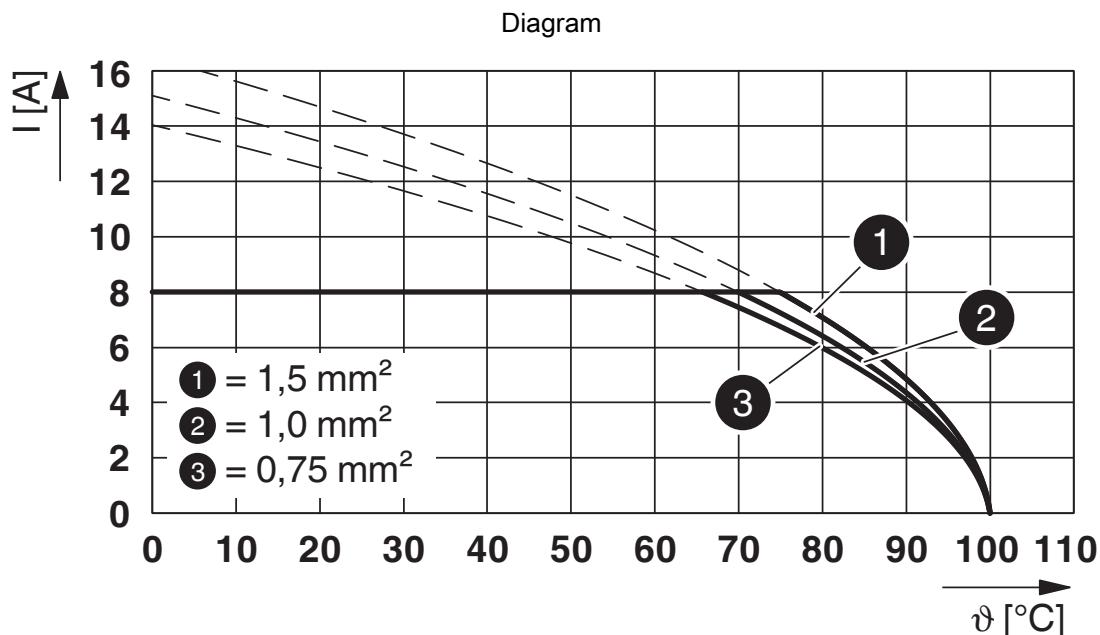
## Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 55 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	Box packaging
Outer packaging type	Carton

## Drawings



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

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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1084012>

cULus Recognized				
Approval ID: E60425-20181123				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group B	300 V	8 A	-	-
Use group C	50 V	8 A	-	-

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## Classifications

### ECLASS

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

### ETIM

ETIM 9.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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