

# ICC20-PPC1,5/4-3,5-AA-7035 - PCB connector



1102107

<https://www.phoenixcontact.com/gb/products/1102107>

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PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: light gray, nominal current: 8 A, rated voltage (III/2): 150 V, contact surface: Sn, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: ICC...-PPC1,5/...-3,5, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: ICC 1,5, locking: without, mounting method: without, type of packaging: packed in cardboard, Color of the spring lever: orange

## Your advantages

- Time saving push-in connection, tools not required
- Variable coding, for reliable protection against incorrect connection
- Push-in technology for quick and easy wiring
- Quick and easily coded when initially connecting the connector and header
- Intuitive operation due to color-coded actuating push button
- High packing density with 3.5 mm pitch

## Commercial data

Item number	1102107
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	ACHAFC
Product key	ACHAFC
GTIN	4055626961057
Weight per piece (including packing)	3.347 g
Weight per piece (excluding packing)	2.87 g
Customs tariff number	85366990
Country of origin	CN

## Technical data

### Product properties

Product type	PCB connector
Product family	ICC...-PPC1,5/...-3,5
Type	Standard
Number of positions	4
Pitch	3.5 mm
Number of connections	4
Number of rows	1
Number of potentials	4

### Electrical properties

#### Properties

Nominal current $I_N$	8 A
Nominal voltage $U_N$	150 V
Contact resistance	2.19 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

### Connection data

#### Connection technology

Connector system	ICC 1,5
Nominal cross section	1.5 mm <sup>2</sup>
Contact connection type	Socket

#### Interlock

Locking type	without
Mounting flange	without

#### Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
Stripping length	10 mm

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## 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

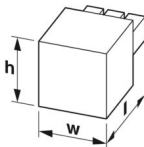
### Material data - housing

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

### Material data – actuating element

Color (Actuating element)	orange (2003)
Insulating material	PBT
CTI according to IEC 60112	275
Flammability rating according to UL 94	V0

## Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	14.1 mm
Height [h]	14.9 mm
Length [l]	22 mm

## Notes

Coding	For details, refer to the product drawing in the “Downloads” tab.
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### Safety note

Safety note	<p>WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</p> <p>• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace</p>
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	damaged products. Repairs are not possible.
	<ul style="list-style-type: none"> <li>• <b>WARNING:</b> Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li> </ul>
	<ul style="list-style-type: none"> <li>• The item is intended to be an unencapsulated plug for installation in a housing.</li> </ul>
	<ul style="list-style-type: none"> <li>• Operate the connector only when it is fully plugged in.</li> </ul>

## Mechanical tests

### Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

### Repeated connection and disconnection

Specification	IEC 60999-1:1999-11
Result	Test passed

### Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

### Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	6.1 N
Withdraw strength per pos. approx.	3.9 N

### 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

### Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

### Dimension check

Specification	IEC 60512-1-2:2002-02
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Result	Test passed
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## 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	50 m/s <sup>2</sup> (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>	2.19 mΩ
Contact resistance R <sub>2</sub>	2.17 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 TΩ

### 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	1.39 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

## 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	> 1 TΩ

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600

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Rated insulation voltage (III/3)	150 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)	1.6 mm
Rated insulation voltage (III/2)	150 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)	0.8 mm
Rated insulation voltage (II/2)	250 V
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	1.25 mm

## Packaging specifications

Type of packaging	packed in cardboard
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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1102107>

<div> <b>cULus Recognized</b> Approval ID: E60425-20181123</div>				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B				
Field wiring	150 V	8 A	24 - 16	-

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## Classifications

### ECLASS

ECLASS-13.0	27460202
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### ETIM

ETIM 9.0	EC002638
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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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