

# IPCV 5/11-GF-7,62 - PCB header

1709021

<https://www.phoenixcontact.com/us/products/1709021>



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PCB headers, nominal cross section: 6 mm<sup>2</sup>, color: green, nominal current: 41 A, rated voltage (III/2): 630 V, contact surface: Sn, contact connection type: Socket, number of potentials: 11, number of rows: 1, number of positions: 11, number of connections: 11, product range: IPCV 5/..-GF, pitch: 7.62 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard



## Your advantages

- Well-known mounting principle allows worldwide use
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections
- Screwable flange for superior mechanical stability
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations

## Commercial data

Item number	1709021
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA04
Product key	AADSCF
Catalog page	Page 543 (C-1-2013)
GTIN	4046356090001
Weight per piece (including packing)	31.85 g
Weight per piece (excluding packing)	31.15 g
Customs tariff number	85366930
Country of origin	PL

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## Technical data

### Product properties

Product type	PCB headers
Product family	IPCV 5/..-GF
Product line	COMBICON Connectors L
Type	Inverted
Number of positions	11
Pitch	7.62 mm
Number of connections	11
Number of rows	1
Number of potentials	11
Mounting flange	Threaded flange
Pin layout	Linear pinning
Solder pins per potential	3

### Data management status

Article revision	04
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### Electrical properties

Nominal current $I_N$	41 A
Nominal voltage $U_N$	630 V
Contact resistance	0.4 mΩ
Rated voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
Rated voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

### Flange

Tightening torque	0.3 Nm ... 0.7 Nm
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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	hot-dip tin-plated
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

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Metal surface soldering area (top layer)	Tin (4 - 8 $\mu\text{m}$ Sn)
Material data - housing	
Color (Housing)	green (6021)
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

Notes on operation	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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## Dimensions

Dimensional drawing	
Pitch	7.62 mm
Width [w]	99.04 mm
Height [h]	35.1 mm
Length [l]	12.8 mm
Installed height	30.1 mm
Solder pin length [P]	5 mm
Pin dimensions	1.2 x 0.8 mm
PCB design	
Pin spacing	7.62 mm
Hole diameter	1.3 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

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## 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	50
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	12

### 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	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	8 mm
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
minimum clearance value - non-homogenous field (III/2)	5.5 mm
minimum creepage distance (III/2)	5.5 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

## Environmental and real-life conditions

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## 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	9.8 kV
Contact resistance $R_1$	0.4 mΩ
Contact resistance $R_2$	0.5 mΩ
Insertion/withdrawal cycles	50
Insulation resistance, neighboring positions	> 5 MΩ

## 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	105 °C/168 h
Power-frequency withstand voltage	4.26 kV

## Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

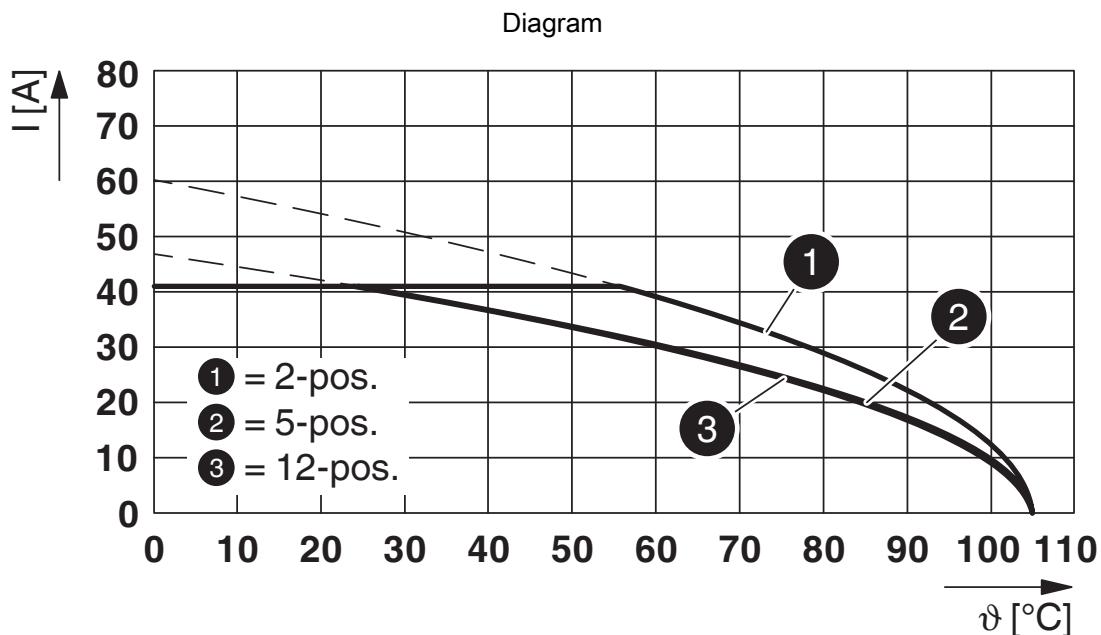
## Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °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

Type of packaging	packed in cardboard
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## Drawings



Type: IPC 5/...-STF-7,62 with IPCV 5/...-GF-7,62

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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1709021>

 <b>cULus Recognized</b> Approval ID: E60425-19920722				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group B				
For 600 V applications, additional insulation is required on the solder pins	300 V	41 A	-	-
Use group C				
For 600 V applications, additional insulation is required on the solder pins	300 V	41 A	-	-
Use group D				
Alternative 1	600 V	5 A	-	-

 <b>UL Recognized</b> Approval ID: E60425-19920722				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group F	600 V	41 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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