

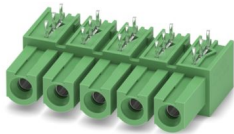
# IPC 16/ 5-GU-10,16 - PCB header



1969881

<https://www.phoenixcontact.com/gb/products/1969881>

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PCB headers, nominal cross section: 16 mm<sup>2</sup>, color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Ag, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: IPC 16/..-GU, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: reversed, locking: without, mounting method: without, type of packaging: packed in cardboard, Plug direction parallel to the PCB: connector part rotated by 180° with respect to the plug axis.

## 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
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations

## Commercial data

Item number	1969881
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AAESCD
Product key	AAESCD
Catalog page	Page 571 (C-1-2013)
GTIN	4017918948634
Weight per piece (including packing)	19.38 g
Weight per piece (excluding packing)	19.336 g
Customs tariff number	85366990
Country of origin	PL

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## Technical data

### Product properties

Product type	PCB headers
Product family	IPC 16/...-GU
Product line	COMBICON Connectors XL
Type	Inverted
Number of positions	5
Pitch	10.16 mm
Number of connections	5
Number of rows	1
Number of potentials	5
Mounting flange	without
Pin layout	Linear pinning
Solder pins per potential	3

### Electrical properties

#### Properties

Nominal current $I_N$	76 A
Nominal voltage $U_N$	1000 V
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 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	completely silver-plated
Metal surface contact area (top layer)	Silver (4 - 8 $\mu\text{m}$ Ag)
Metal surface soldering area (top layer)	Silver (4 - 8 $\mu\text{m}$ Ag)

#### Material data - housing

Color (Housing)	green (6021)
Insulating material	PA

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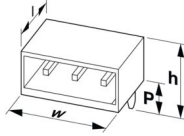
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Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for 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	10.16 mm
Width [w]	51.6 mm
Height [h]	17.4 mm
Length [l]	32.1 mm
Installed height	13.6 mm
Solder pin length [P]	4 mm
Pin dimensions	0.8 x 1.2 mm

## PCB design

Pin spacing	10.16 mm
Hole diameter	1.7 mm

## Electrical tests

### 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)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm

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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

### Ambient conditions

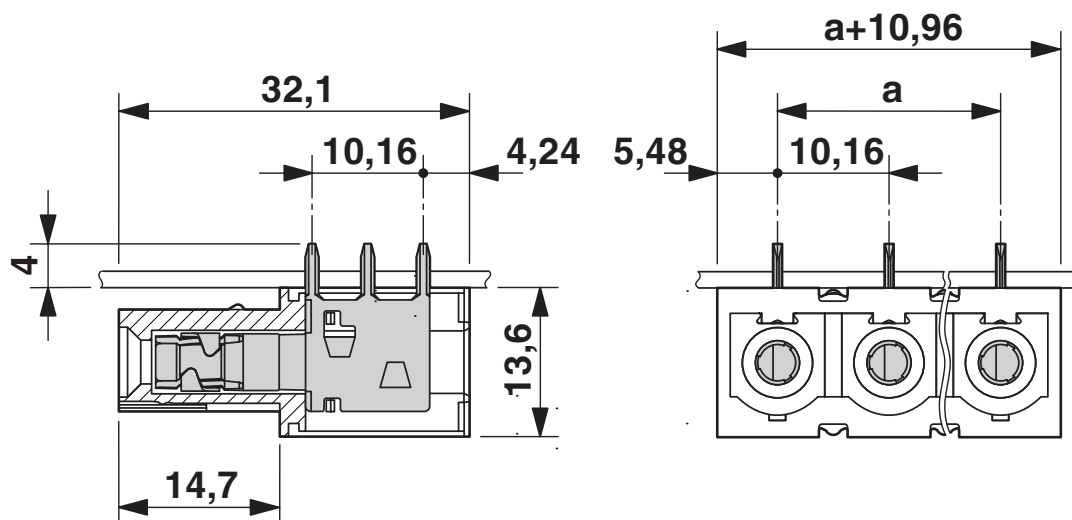
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
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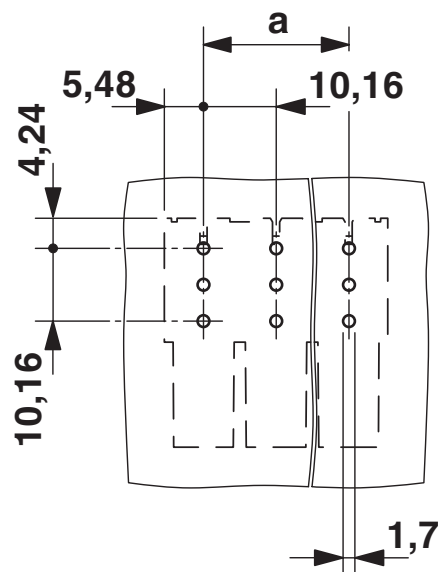
## Drawings

Dimensional drawing



The figure shows the 3-pos. version

Drilling plan/solder pad geometry



The figure shows the 3-pos. version

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1969881>

 <b>cULus Recognized</b> Approval ID: E60425-20040202				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	300 V	66 A	-	-
Use group C	300 V	66 A	-	-
Use group D	600 V	5 A	-	-

 <b>VDE approval of drawings</b> Approval ID: 40055586				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	1000 V	76 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27460201
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### 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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