

IPC 16/ 3-G-10,16 - PCB header



1969548

<https://www.phoenixcontact.com/it/products/1969548>

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PCB headers, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: IPC 16/..-G, 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: Standard, locking: without, mounting: without, 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
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations

Commercial data

Item number	1969548
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AAE
Product key	AAESCA
Catalog page	Page 570 (C-1-2013)
GTIN	4017918943783
Weight per piece (including packing)	11.874 g
Weight per piece (excluding packing)	8.35 g
Customs tariff number	85366990
Country of origin	PL

Technical data

Product properties

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

Electrical properties

Nominal current I_N	76 A
Nominal voltage U_N	1000 V
Degree of pollution	3
Contact resistance	0.3 mΩ
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 μm Ag)
Metal surface soldering area (top layer)	Silver (4 - 8 μm Ag)

Material data - housing

Color (Housing)	green (6021)
Insulating material	PA

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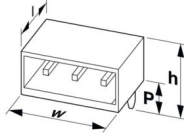
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Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for 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]	31.28 mm
Height [h]	17.6 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

Mechanical tests

Visual inspection	
Specification	IEC 60512-1:2001-01
Result	Test passed
Dimension check	
Specification	IEC 60512-1:2001-01
Result	Test passed
Resistance of inscriptions	
Specification	IEC 60068-2-70:1995-12
Result	Test passed
Polarization and coding	

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Specification	IEC 60512-7:1993-08 (Polarization)
Result	Test passed

Contact holder in insert

Specification	IEC 60512-8:1993-01
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.	12 N
Withdraw strength per pos. approx.	11 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	9

Insulation resistance

Specification	IEC 60512-2:1985-00
Insulation resistance, neighboring positions	$10^{12} \Omega$

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
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

Vibration test

Specification	IEC 60068-2-6:1995-03
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min

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Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

Durability test

Specification	IEC 60512-5:1992-08
Impulse withstand voltage at sea level	9.8 kV
Contact resistance R_1	0.3 m Ω
Contact resistance R_2	0.4 m Ω
Insertion/withdrawal cycles	50

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	KFW 0.2 S/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	4.26 kV

Ambient conditions

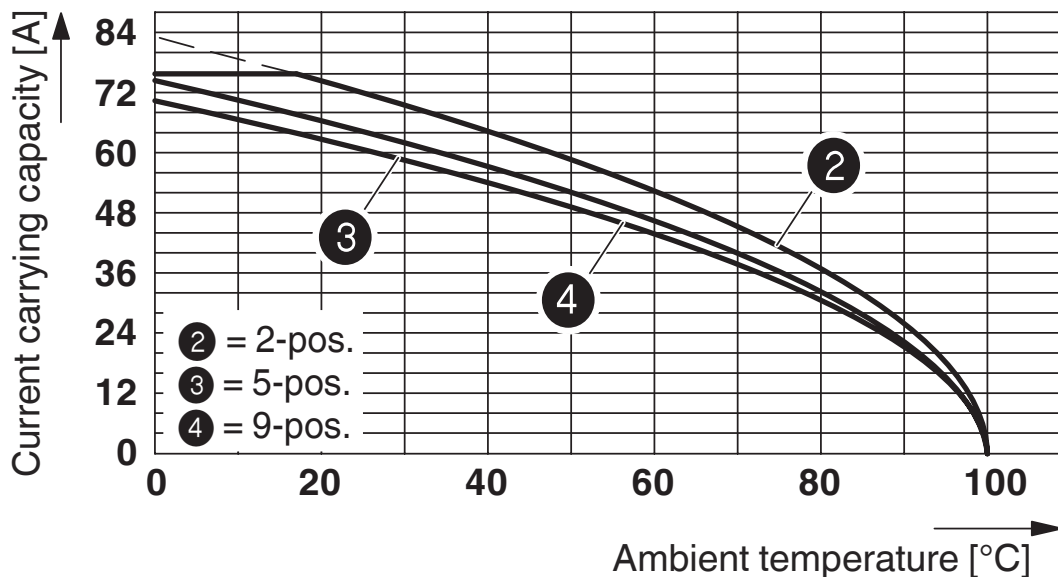
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
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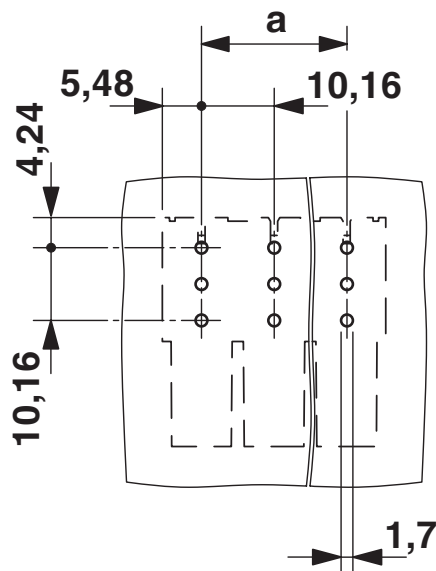
Drawings

Diagram



Derating curve for: IPC 16/...-ST-10,16 with IPC 16/...-G-10,16

Drilling plan/solder pad geometry

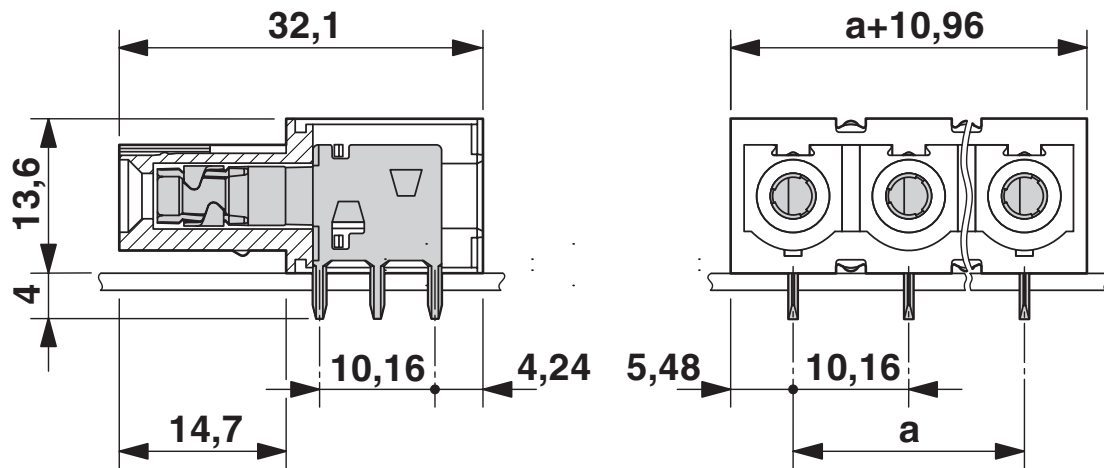


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Dimensional drawing



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Approvals

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 cULus Recognized Approval ID: E60425-20040202				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	66 A	-	-
Use group C	300 V	66 A	-	-
Use group D	600 V	5 A	-	-

 VDE Zeichengenehmigung Approval ID: 40055586				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	1000 V	76 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

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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Phoenix Contact UAB
Svitrigailos str. 11B
03228 Vilnius
+370 5 2106321
balticinfo@phoenixcontact.com