PC 6-16/ 4-G1F-10,16 - PCB header

1999026

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PCB headers, nominal cross section: 16 mm^2, color: green, nominal current: 76 A (41 A in combination with PC 6 plug), rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PC 6-16/..-G1F, 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: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use
- Screwable flange for superior mechanical stability
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

Commercial data

Item number	1999026
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA05
Product key	AAESBB
Catalog page	Page 567 (C-1-2013)
GTIN	4046356038522
Weight per piece (including packing)	22.226 g
Weight per piece (excluding packing)	19.968 g
Customs tariff number	85366930
Country of origin	PL

Technical data

Product properties

Product type	PCB headers
Product family	PC 6-16/..-G1F
Product line	COMBICON Connectors XL
Type	Headers
Number of positions	4
Pitch	10.16 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Mounting flange	Threaded flange
Pin layout	Linear pinning
Solder pins per potential	3

Electrical properties

Nominal current I_N	76 A (41 A in combination with PC 6 plug)
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

Flange

Tightening torque	0.3 Nm ... 0.7 Nm

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	Electroplated silver
Metal surface contact area (top layer)	Silver (4 - 8 µm Ag)
Metal surface contact area (middle layer)	Nickel (2 - 4 µm Ni)
Metal surface soldering area (top layer)	Silver (4 - 8 µm Ag)

Metal surface soldering area (middle layer)	Nickel (2 - 4 µm Ni)

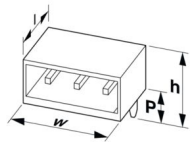
Material data - housing

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

General	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.

Dimensions

Dimensional drawing	
Pitch	10.16 mm
Width [w]	58.4 mm
Height [h]	17.4 mm
Length [l]	34 mm
Installed height	13.4 mm
Solder pin length [P]	4 mm
Pin dimensions	1 x 1.2 mm

PCB design

Pin spacing	10.16 mm
Hole diameter	1.7 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

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.	14 N
Withdraw strength per pos. approx.	12 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	8

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)	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 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
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 60512-9-1:2010-03
Impulse withstand voltage at sea level	9.8 kV
Contact resistance R_1	0.3 mΩ
Contact resistance R_2	0.3 mΩ
Insertion/withdrawal cycles	50
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm^3 SO_2 on 300 dm^3/40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	4.26 kV

Ambient conditions

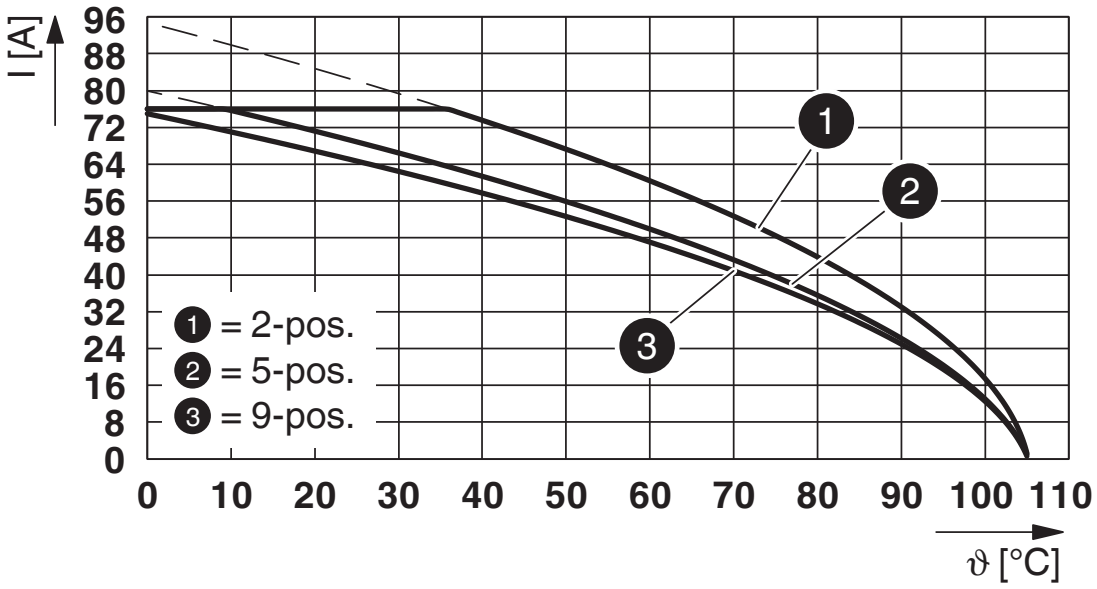
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard

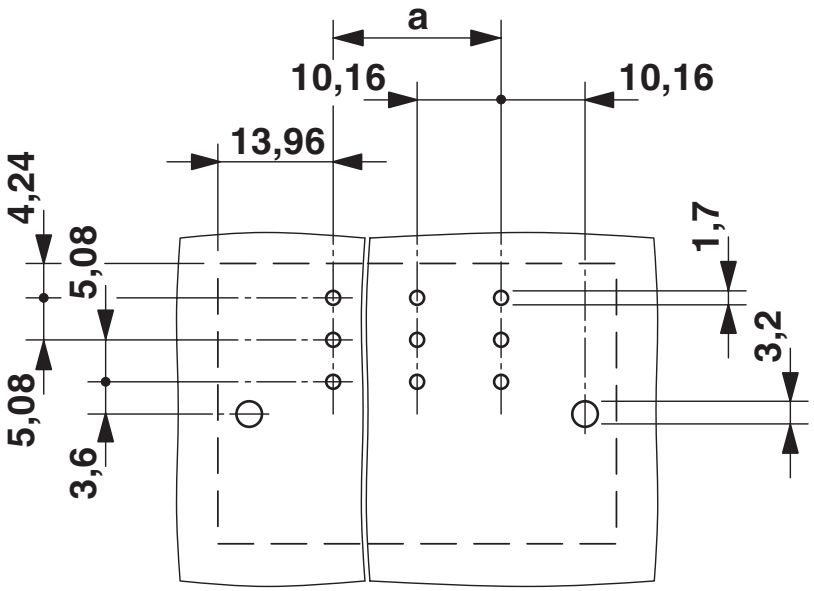
Drawings

Diagram

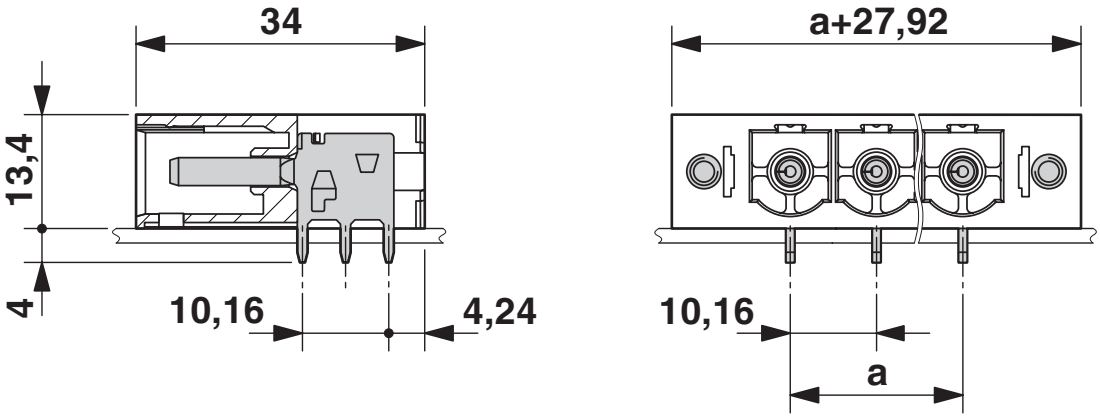


Type: SPC 16/...-STF-10,16 with PC 6-16/...-G1F-10,16

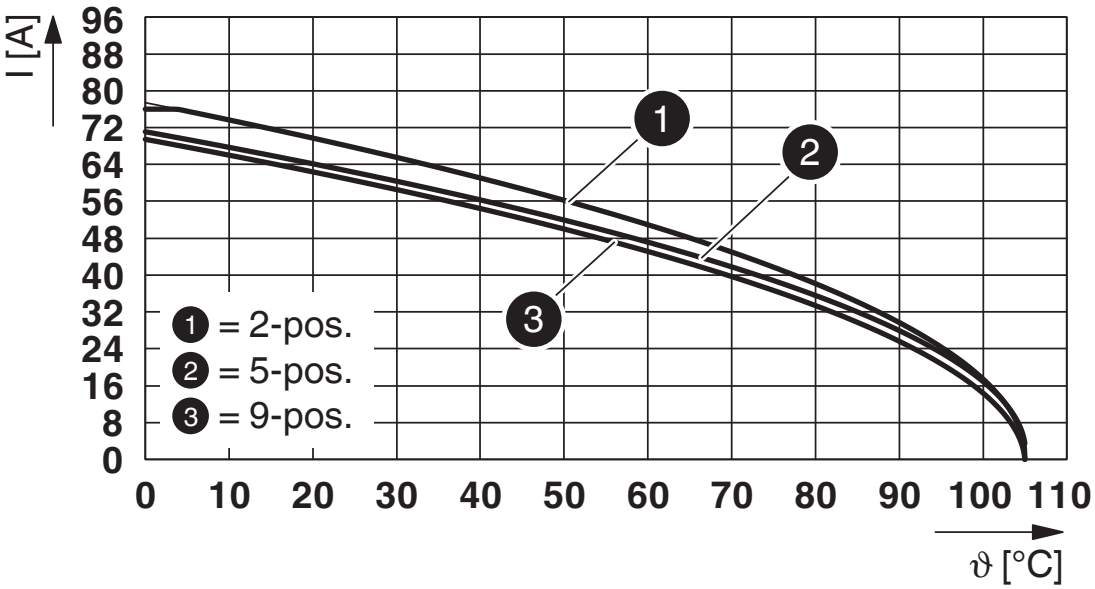
Drilling plan/solder pad geometry



Dimensional drawing



Diagram



Type: PC 16/...-STF-10,16 with PC 6-16/...-G1F-10,16

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1999026

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	-	-

Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002637

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

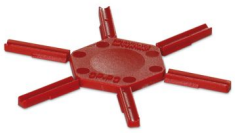
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

Accessories

CP-PC RD - Coding profile

1701967

https://www.phoenixcontact.com/us/products/1701967



Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red

DFK-PC 16-SS - Accessories

1705449

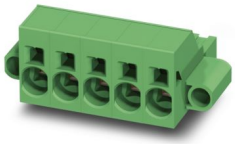
https://www.phoenixcontact.com/us/products/1705449

Screw set for DFK-PC 16... connectors

SPC 16/ 4-STF-10,16 - PCB connector

1711394

https://www.phoenixcontact.com/us/products/1711394

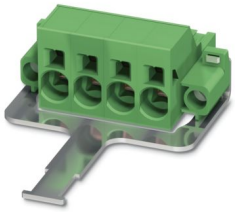


PCB connector, nominal cross section: 16 mm^2, color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: SPC 16/..-STF, pitch: 10.16 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

SPC 16/ 4-STF-SH-10,16 - PCB connector

1711488

https://www.phoenixcontact.com/us/products/1711488



PCB connector, nominal cross section: 16 mm^2, color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: SPC 16/..-STF-SH, pitch: 10.16 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

PC 6-16/ 4-G1F-10,16 - PCB header

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TPC 16/ 4-STF-10,16 - PCB connector

1715277

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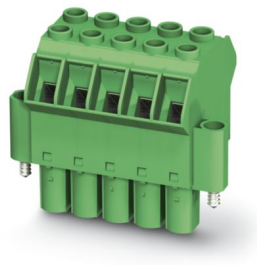

PCB connector, nominal cross section: 16 mm^2, color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 8, product range: TPC 16/..-STF, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 50 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

PC 6/ 4-STF-10,16 - PCB connector

1913594

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PCB connector, nominal cross section: 6 mm^2, color: green, nominal current: 41 A, rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PC 6/..-STF, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

PC 6-16/ 4-G1F-10,16 - PCB header

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PC 16/ 4-STF-10,16 - PCB connector

1967472

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PCB connector, nominal cross section: 16 mm^2, color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PC 16/..-STF, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

PC 16/ 4-STF-SH-10,16 - PCB connector

1970359

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PCB connector, nominal cross section: 16 mm^2, color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PC 16/..-STF-SH, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

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