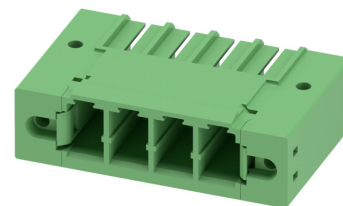


Item No.: 1720819

Type: PC 5/ 4-GF-7,62

PCB headers



## 1 Main features



- |                         |                   |                        |                     |
|-------------------------|-------------------|------------------------|---------------------|
| • No. of pos.           | 4                 | • Nominal current      | 32 A                |
| • Nominal cross section | 6 mm <sup>2</sup> | • Nominal voltage      | 630 V               |
| • Color                 | green (RAL 6021)  | • Connection direction | 0 °                 |
| • Pitch                 | 7.62 mm           | • Type of packaging    | packed in cardboard |
| • Mounting type         | Wave soldering    |                        |                     |

## 2 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



Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.com/product/1720819](https://phoenixcontact.com/product/1720819)

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**4 3D model in PDF can be activated (Acrobat Reader only)**



**1720819 PC 5/ 4-GF-7,62****5 General Technical Data****5.1 item properties**

Item no.	1720819
Type	PC 5/ 4-GF-7,62
Product line	COMBICON Connectors L
Connector system	COMBICON PC 5
Product type	PCB headers
Contact connection type	Pin
Range of articles	PC 5/..-GF
Pitch	7.62 mm
Number of positions	4
Number of rows	1
Number of connections	4
Number of potentials	4
Connection direction of the connector to the PCB	0 °
Pin layout	Linear pinning
Solder pins per potential	3
Type	Standard

**1720819 PC 5/ 4-GF-7,62****6 Mounting method****6.1 Flange mounting**

Type of locking	Screw locking mechanism
Mounting flange	Threaded flange
Tightening torque	0.3 Nm ... 0.7 Nm

**6.2 Mounting the PCB**

Screw	1705449 DFK-PC 16-SS
Tightening torque	0.3 Nm

**7 Material properties****7.1 Material of metal parts**

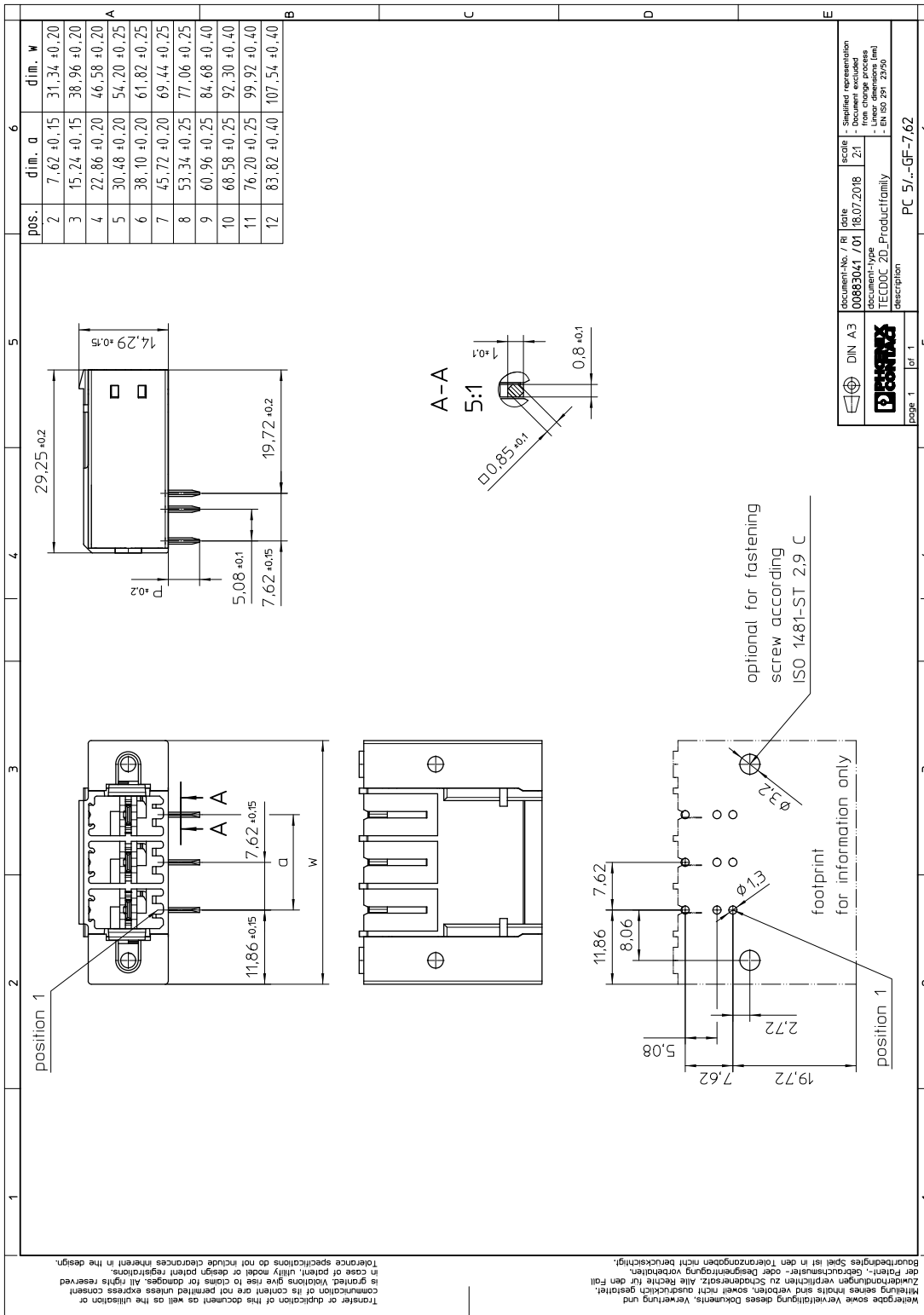
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface contact area	Tin (4 - 8 µm Sn)
Soldering area surface	Tin (4 - 8 µm Sn)
Surface characteristics	hot-dip tin-plated
<b>Insulating material data</b>	<b>Housing</b>
Color	green (RAL 6021)
Insulating 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

**1720819 PC 5/ 4-GF-7,62****8 Dimensions****8.1 Dimensions for the product**

Length	29.25 mm
Width	46.58 mm
Height (without solder pin)	14.29 mm
Total height	19.29 mm
Solder pin [P]	5 mm

1720819 PC 5/ 4-GF-7,62

9 Series drawing



**1720819 PC 5/ 4-GF-7,62****10 Product notes****10.1 General information**

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.

**11 Application****12 Packaging specifications**

Type of packaging	packed in cardboard
-------------------	---------------------

Packing unit	50
--------------	----

**12.1 Temperature limit values**

Ambient temperature (storage/transport)	-40 °C ... 70 °C
---	------------------

Relative humidity (storage/transport)	30 % ... 70 %
---------------------------------------	---------------

Ambient temperature (assembly)	-5 °C ... 100 °C
--------------------------------	------------------

Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
---------------------------------	---

**1720819 PC 5/ 4-GF-7,62****13 Mechanical tests****13.1 Visual examination**

Specification	IEC 61984:2008-10
Visual examination	Test passed
Specification	IEC 60512-1-1:2002-02

**13.2 Dimensional test**

Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02

**13.3 Resistance of marking**

Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12

**13.4 Polarization and coding**

Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N

**13.5 Contact retention in insert**

Contact holder in insert Requirements >20 N	Test passed
Specification	IEC 60512-15-1:2008-05

**1720819 PC 5/ 4-GF-7,62****14 Insertion and withdrawal forces**

Insertion and withdrawal force	
Specification	Test passed
No. of cycles	50
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6.5 N

**1720819 PC 5/ 4-GF-7,62****15 Electrical tests**

Rated current / conductor cross section	32 A / 6 mm <sup>2</sup>
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Contact resistance	0.4 mΩ
Degree of pollution	2

**1720819 PC 5/ 4-GF-7,62****16 Air and creepage distances**

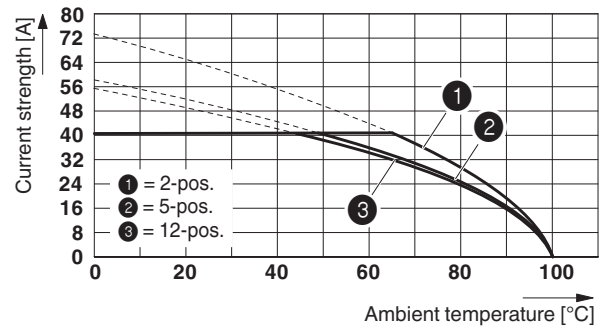
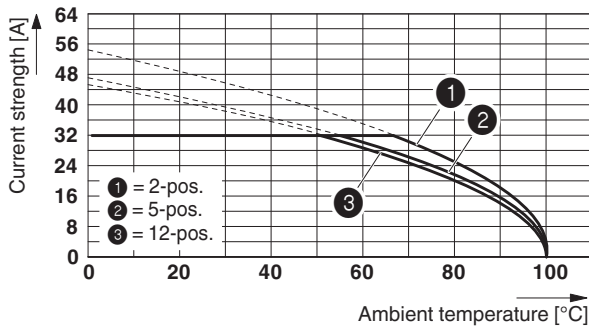
Component	PCB headers		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112)	CTI 600		
Rated insulation voltage	630 V	630 V	1000 V
Rated surge voltage	6 kV	6 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	5.5 mm	5.5 mm	5.5 mm
Minimum value of the creepage path requirement in acc. with table	8 mm	5.5 mm	5.5 mm

1720819 PC 5/ 4-GF-7,62

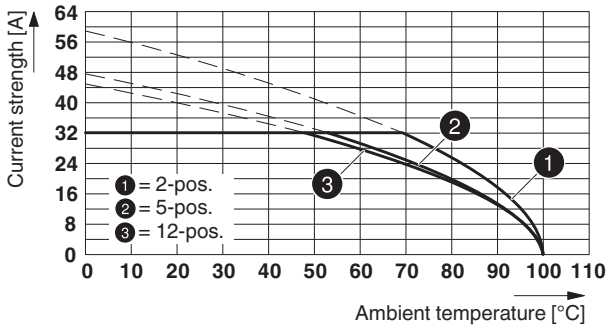
17 Current carrying capacity/derating curves

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Note	For number of positions, see diagram
Reduction factor	0.8
Conductor cross section	6 mm <sup>2</sup>

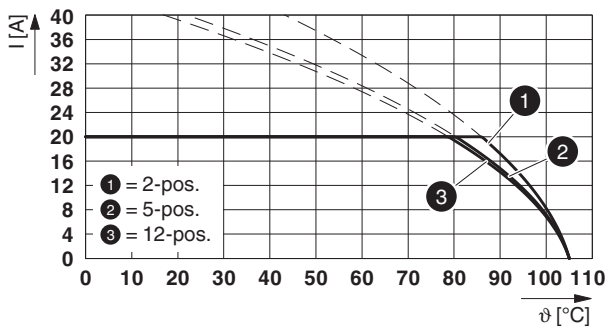
Type: PC 5/...-STF1-7,62 with PC 5/...-GF-7,62  
 Conductor cross section: 6 mm<sup>2</sup>



Type: TSPC 5/...-STF-7,62 with PC 5/...-GF-7,62



Type: PC 4/...-STF-7,62 with PC 5/...-GF-7,62



**1720819 PC 5/ 4-GF-7,62****18 Environmental and durability tests****18.1 Vibration test**

Specification	IEC 60068-2-6:2007-12
Result	Test passed
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
Note	The connecting cables must be strain relieved.

**18.2 Insulation resistance**

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	$>10^{12} \Omega$



1720819 PC 5/ 4-GF-7,62

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## 19 Data transmission

## 1720819 PC 5/ 4-GF-7,62

**20 Approvals / Certificates**

cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
	300 V	41 A	-	-
<b>Usegroup C</b>				
	150 V	41 A	-	-
<b>Usegroup D</b>				
	600 V	5 A	-	-
UL Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup F</b>				
	600 V	41 A	-	-

**1720819 PC 5/ 4-GF-7,62****21 Commercial Data**

Item no.	1720819
Type	PC 5/ 4-GF-7,62
Packing unit	50
Net weight	13.064 g
GTIN	4046356113618
	Information that applies locally, see link on page 1

**22 corresponding plugs**

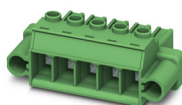
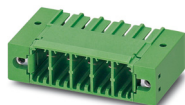
Item no.	Type
1777859	PC 5/ 4-STF1-7,62
1728222	TSPC 5/ 4-STF-7,62
1996142	SPC 5/ 4-STF-7,62

**23 Accessories**

Description	Item No.	Type
Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red	1701967	CP-PC RD
	0804549	SK 7,62/3,8:FORTL.ZAHLEN
	0825128	SK 3,8 REEL P7,62 WH CUS
	0803906	SK U/3,8 WH:UNBEDRUCKT
	0805218	SK 3,8 WH:REEL
Screw set for DFK-PC 16... connectors	1705449	DFK-PC 16-SS

## 1720819 PC 5/ 4-GF-7,62

## 24 Combination tests



PC 5/..-GF	PC 5/..-STF1	TSPC 5/..-STF	PC 4/..-STF
IEC 61984	IEC 61984	IEC 61984	IEC 61984
<b>Mechanical tests (A)</b>			
Insertion/withdrawal force per position	approx. 8 N / 6.5 N	approx. 6 N / 5 N	approx. 16 N / 9 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed
<b>Durability tests (B)</b>			
Contact resistance R <sub>1</sub> 1st level	0.4 mΩ	0.6 mΩ	0.4 mΩ
Contact resistance R <sub>1</sub> 2nd level			
Insertion/withdrawal cycles	50	50	25
Contact resistance R <sub>2</sub>	0.5 mΩ	0.7 mΩ	0.5 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	7.3 kV	7.3 kV	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV	3.31 kV
Insulation resistance Requirements > 5 MΩ	>10 <sup>12</sup> Ω	> 5 MΩ	> 5 MΩ
<b>Thermal tests (C)</b>			
Tested number of positions	12	12	12
Tested conductor cross section	6 mm <sup>2</sup>	6 mm <sup>2</sup>	4 mm <sup>2</sup>
Test current	32 A	32 A	20 A
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed
<b>Climatic tests (D)</b>			
Test sequence 1: low temperature storage	-40 °C/2 h	-40 °C/2 h	-40 °C/2 h
Test sequence 2: heat storage	100 °C/168 h	100 °C/168 h	105 °C/168 h
Test sequence 3: noxious gas storage	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	7.3 kV	7.3 kV	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV	3.31 kV
<b>Environmental and endurance tests (E)</b>			
Specification	IEC 61984:2008-10	IEC 61984:2008-10	IEC 61984:2008-10
Degree of protection	Back of hand safety with IP10 access probe	Back of hand safety with IP10 access probe	Back of hand safety with IP10 access probe