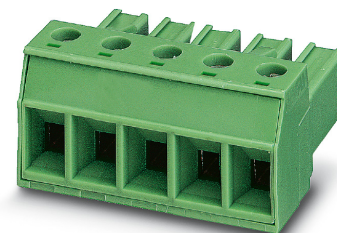


Item No.: 1804920

Type: PC 4/ 4-ST-7,62

PCB connector, Screw connection with tension sleeve



The figure shows a 5-pos. version of the product

## 1 Main features



- |                           |                                      |                        |                     |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos.             | 4                                    | • Nominal current      | 20 A                |
| • Conductor cross section | 4 mm <sup>2</sup>                    | • Nominal voltage      | 630 V               |
| • Color                   | green (6021)                         | • Connection direction | 0 °                 |
| • Pitch                   | 7.62 mm                              | • Type of packaging    | packed in cardboard |
| • Connection method       | Screw connection with tension sleeve |                        |                     |

## 2 Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Integrated double steel spring provides additional safety in the event of temperature and power fluctuations



Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1804920](https://phoenixcontact.net/product/1804920)

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



**1804920 PC 4/ 4-ST-7,62****5 General Technical Data****5.1 item properties**

Item no.	1804920
Type	PC 4/ 4-ST-7,62
Product line	COMBICON Connectors L
Connector system	COMBICON PC 4
Product type	PCB connector
Type of contact	Female connector
Range of articles	PC 4/..-ST
Pitch	7.62 mm
Number of positions	4
Number of rows	1
Number of connections	4
Number of potentials	4
Connection method	Screw connection with tension sleeve
Screw thread	M3
Drive form screw head	Slotted (L)
Connection direction of the conductor to plug-in direction	0 °
Type	Standard

**1804920 PC 4/ 4-ST-7,62**

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**6 Mounting**

**6.1 Flange mounting**

Type of locking	without
Mounting flange	without

**1804920 PC 4/ 4-ST-7,62****7 Conductor connection****7.1 Connection capacity**

Nominal cross section	4 mm <sup>2</sup>
Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.0 mm
Stripping length	7 mm
Tightening torque	0.5 Nm ... 0.6 Nm

**7.2 Connection capacity AWG**

Conductor cross section AWG	24 ... 10
-----------------------------	-----------

**1804920 PC 4/ 4-ST-7,62****8 Material properties****8.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Terminal point surface	Tin (4 - 8 µm Sn)
Surface contact area	Tin (4 - 8 µm Sn)
Surface characteristics	hot-dip tin-plated

**8.2 Material of plastic parts**

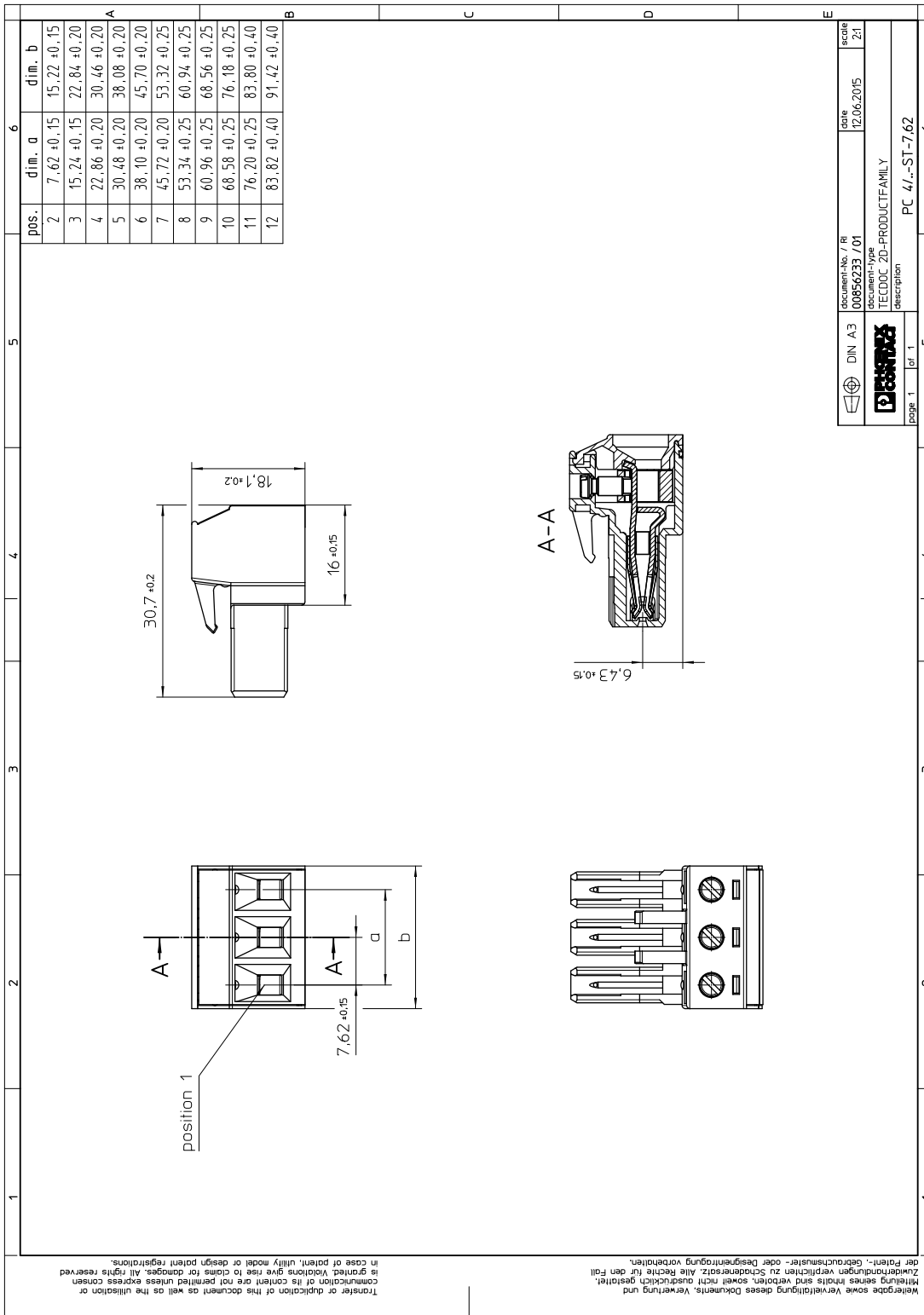
	Housing
Color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

**1804920 PC 4/ 4-ST-7,62****9 Dimensions****9.1 Dimensions for the product**

Length	30.7 mm
Width	30.46 mm
Total height	18.1 mm

1804920 PC 4/ 4-ST-7,62

10 Series drawing



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**1804920 PC 4/ 4-ST-7,62****11 Product notes****11.1 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.

**12 Packaging information**

Type of packaging

packed in cardboard

Pieces per package

50

**13 Application****13.1 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)

**1804920 PC 4/ 4-ST-7,62****14 General tests****14.1 Specification**

Specification	IEC 61984
Specification	IEC 60999-1
Brief description	Printed-circuit board connector

**15 Mechanical tests****15.1 Check for damage to conductor or loosening**

Result	Test passed
Specification	IEC 60999-1:1999-11

**15.2 Pull-out test**

Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm <sup>2</sup> / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm <sup>2</sup> / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	4 mm <sup>2</sup> / solid / > 60 N
Conductor cross section/conductor type/tractive force actual value	4 mm <sup>2</sup> / flexible / > 60 N

**15.3 Torque test**

Specification	IEC 60999-1:1999-11
Result	Test passed

**15.4 Visual examination**

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

**15.5 Dimensional test**

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

**15.6 Resistance of marking**

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

**15.7 Polarization and coding**

# 1804920 PC 4/ 4-ST-7,62

Polarization when inserted  
Requirement >20 N

Test passed

Specification

IEC 60512-13-5:2006-02

**1804920 PC 4/ 4-ST-7,62****16 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.	5 N

**1804920 PC 4/ 4-ST-7,62****17 Electrical tests**

Rated current / conductor cross section	20 A / 4 mm <sup>2</sup>
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Contact resistance	0.5 mΩ
Degree of pollution	2

**1804920 PC 4/ 4-ST-7,62****18 Air and creepage distances**

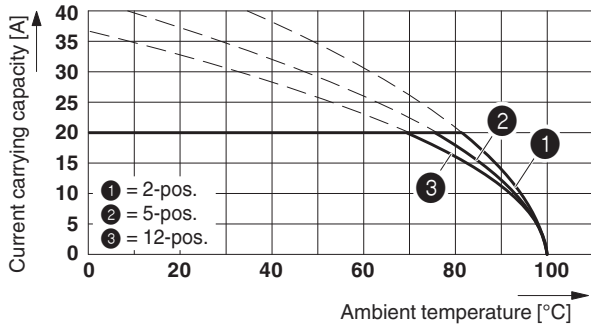
Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112)	CTI 600		
Rated insulation voltage	400 V	630 V	1000 V
Rated surge voltage	6 kV	6 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	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	5.5 mm	5.5 mm	5.5 mm

1804920 PC 4/ 4-ST-7,62

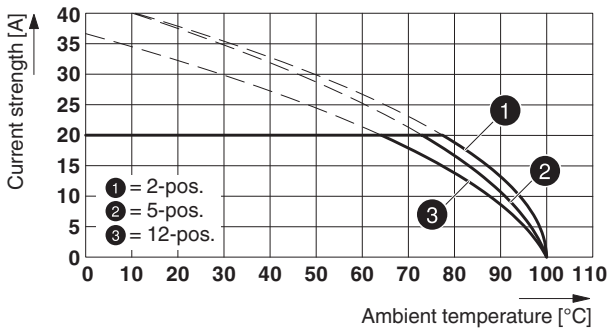
19 Current carrying capacity/derating curves

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	4 mm <sup>2</sup>

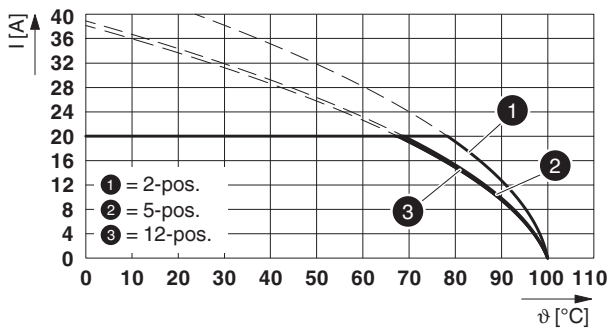
Type: PC 4/...-ST-7,62 with PC 4/...-G-7,62



Type: PC 4/...-ST-7,62 with PC 5/...-G-7,62

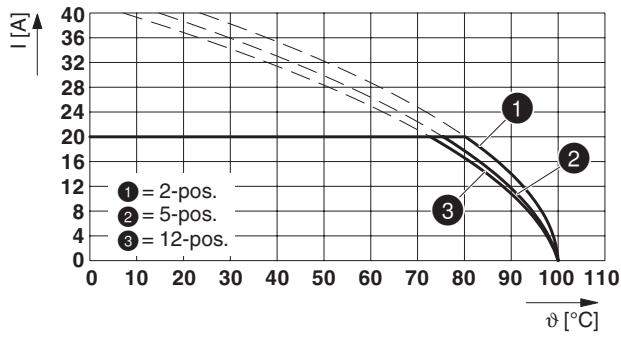


Type: PC 4/...-ST-7,62 with PC 5/...-GU-7,62



# 1804920 PC 4/ 4-ST-7,62

Type: PC 4/...-ST-7,62 with PCV 5/...-G-7,62



**1804920 PC 4/ 4-ST-7,62****20 Environmental and durability tests**

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 connected conductor loops were guided to the test sample at a distance of approx. 10 cm.

**20.1 Insulation resistance**





Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 5 MΩ

**1804920 PC 4/ 4-ST-7,62****21 Type approval and special tests****22 Classification for connectors**

Specification	IEC 61984:2008-10
Main features	Connectors without switching capacity (COC)
Construction form	Fixed connectors
Strain relief elements	without strain relief
Connection method	Can be reconnected
Protection against electric shock	not encapsulated - back of hand safety when plugged in
Protective conductor	without PE
Locking	no
Connection method	Screw terminal points

## 1804920 PC 4/ 4-ST-7,62

**23 Approvals / Certificates**

CSA 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
	300 V	20 A	28 - 10	-
<b>Usegroup C</b>				
	300 V	20 A	28 - 10	-
EAC 				
<b>cULus Recognized </b>	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
	300 V	30 A	30 - 10	-
<b>Usegroup C</b>				
	300 V	30 A	30 - 10	-
<b>Usegroup D</b>				
	600 V	5 A	30 - 10	-
BV 				

**1804920 PC 4/ 4-ST-7,62****24 Commercial Data**

Item no.	1804920
Type	PC 4/ 4-ST-7,62
Pieces per package	50
Net weight	16.451 g
GTIN	4017918046361
	Information that applies locally, see link on page 1

**25 corresponding headers**

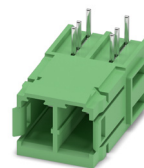
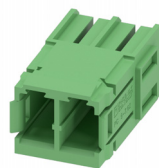
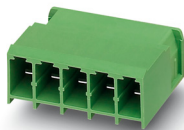
Item no.	Type
1804700	PCV 4/ 4-G-7,62
1804810	PC 4/ 4-G-7,62

**26 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
Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip	1205053	SZS 0,6X3,5

## 1804920 PC 4/ 4-ST-7,62

## 27 Combination tests



PC 4/..-ST	PC 4/..-G	PC 5/..-G	PC 5/..-GU	PCV 5/..-G
IEC 61984	IEC 61984	IEC 61984	IEC 61984	IEC 61984
<b>Mechanical tests (A)</b>				
Insertion/withdrawal force per position	approx. 8 N / 5 N	approx. 18 N / 11 N	approx. 8 N / 6 N	approx. 18 N / 10 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed	Test passed
<b>Durability tests (B)</b>				
Contact resistance R <sub>1</sub> 1st level	0.5 mΩ	0.5 mΩ	0.5 mΩ	0.5 mΩ
Contact resistance R <sub>1</sub> 2nd level				
Insertion/withdrawal cycles	50	25	25	25
Contact resistance R <sub>2</sub>	0.6 mΩ	0.5 mΩ	0.5 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	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV	3.31 kV	3.31 kV
Insulation resistance Requirements > 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ	> 5 MΩ
<b>Thermal tests (C)</b>				
Tested number of positions	12	12	12	12
Tested conductor cross section	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>
Test current	20 A	20 A	20 A	20 A
Upper limiting temperature Requirements < 100°C	Test passed	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	-40 °C/2 h
Test sequence 2: heat storage	100 °C/168 h	100 °C/168 h	100 °C/168 h	100 °C/168 h
Test sequence 3: noxious gas storage (ISO 6988)	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	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	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	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	IEC 61984:2008-10
Degree of protection	Back of hand safety with IP10 access probe	Finger safety with IP20 test finger	Back of hand safety with IP10 access probe	Back of hand safety with IP10 access probe