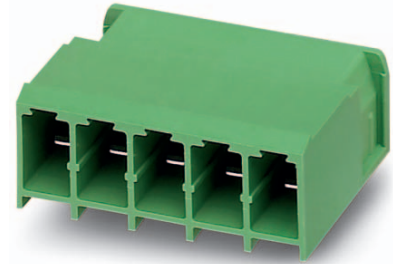


**Order No.:** 1804894

**Type:** PC 4/12-G-7,62

**Header**



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

## 1 Main features



- |                         |                   |                        |                     |
|-------------------------|-------------------|------------------------|---------------------|
| • No. of pos.           | 12                | • Nominal current      | 20 A                |
| • Nominal cross section | 4 mm <sup>2</sup> | • Nominal voltage      | 630 V               |
| • Color                 | green             | • 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

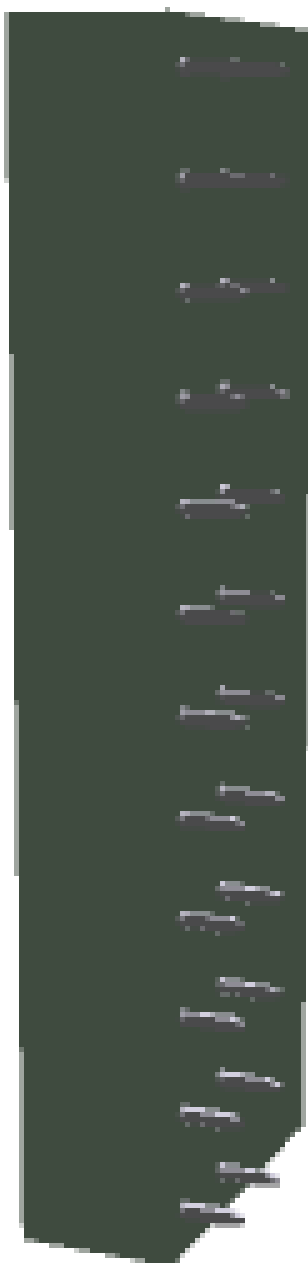


Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1804894](https://phoenixcontact.net/product/1804894)

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



**1804894 PC 4/12-G-7,62****5 item properties**

Order No.	1804894
Type	PC 4/12-G-7,62
Type of contact	Male connector
Range of articles	PC 4/...-G
Pitch	7.62 mm
Number of positions	12
Locking	without
Mounting type	Wave soldering
Pin layout	Linear pinning
Product note	Mounting flange: Accessory Order No. 1827570

**5.1 Material data**

<b>Material of metal parts</b>	
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface contact area	Ni 2 µm ... 5 µm , Sn 5 µm ... 7 µm
Soldering area surface	Ni 2 µm ... 5 µm , Sn 5 µm ... 7 µm
Surface characteristics	Tin-plated
<b>Insulating material data</b>	
Insulating material	PA
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Color	green (6021)

**6 Dimensions****6.1 Dimensions for the product**

Length	29 mm
Width	91.42 mm
Height (without solder pin)	14.25 mm
Total height	19.25 mm
Solder pin [P]	5 mm
Dimension a	83.82 mm

**6.2 Dimensions for PCB design**

Hole diameter	1.3 mm
Pin dimensions	1 x 0,8 mm

**1804894 PC 4/12-G-7,62**

## 7 Series drawing

## 8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

## 9 Application

### 9.1 Temperature limit values

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

**1804894 PC 4/12-G-7,62****10 Mechanical tests**

Mechanical test group A	
Specification	IEC 61984:2008-10
Visual test	Test passed
Specification	IEC 60512-1-1:2002-02
Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02
Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12
Insertion and withdrawal force	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	50
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	5 N
Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N
Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	42 N

**1804894 PC 4/12-G-7,62****11 Electrical tests****11.1 Electrical data**

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

**11.2 Air and creepage distances**

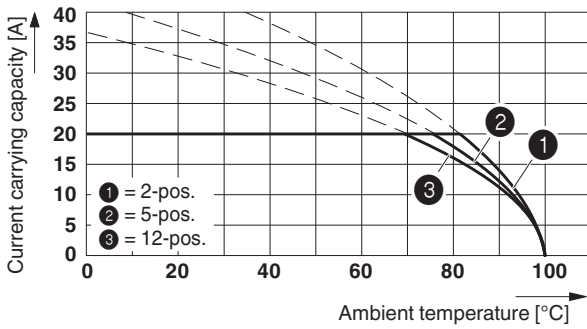
Component	Header		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	400 V	630 V	630 V
Rated surge voltage	6 kV	6 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	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

1804894 PC 4/12-G-7,62

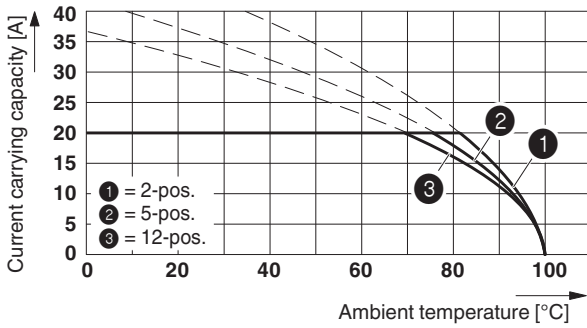
12 Current carrying capacity/derating curves

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	0.8
Number of positions	See diagram
Conductor cross section	4 mm <sup>2</sup>
Note	

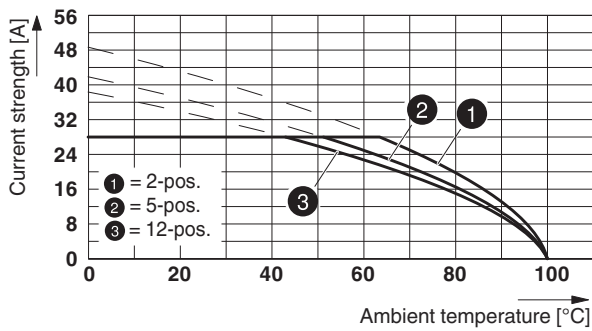
Type: PC 4/...-ST-7,62 with PC 4/...-G-7,62



Type: PC 4/...-STF-7,62 with PC 4/...-G-7,62 and BF-PC 4

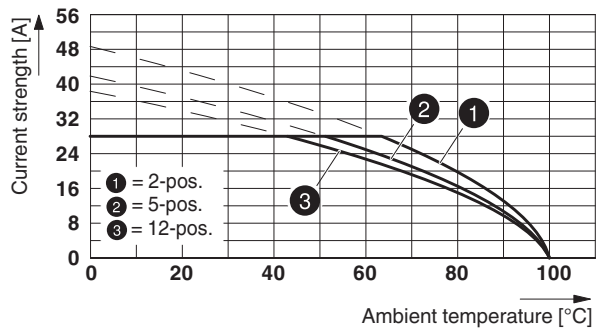


Derating curve for: PC 5/...-ST1-7,62 with PC 4/...-G-7,62  
Conductor cross section: 4 mm<sup>2</sup>



**1804894 PC 4/12-G-7,62**

**Type: PC 5/...-STF1-7,62 with PC 4/...-G-7,62 and BF-PC 4**  
**Conductor cross section: 4 mm<sup>2</sup>**



**Typ: PC 4/...-STF-7,62 mit PCV 4/...-G-7,62 und BF-PC 4**


**1804894 PC 4/12-G-7,62****13 Environmental and durability tests****13.1 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 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis


**14 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
Protection against electric shock	not encapsulated - back of hand safety when plugged in
Protection class	
Protective conductor	without PE
Lock	no

**15 Approvals**

CSA 				
Use group	B	C		
mm <sup>2</sup> /AWG/kcmil				
Voltage	300 V	300 V		
Current	20 A	20 A		

UL Recognized 				
Use group	B	C		
mm <sup>2</sup> /AWG/kcmil				
Voltage	300 V	300 V		
Current	20 A	20 A		

cUL Recognized 				
Use group	B	C		
mm <sup>2</sup> /AWG/kcmil				
Voltage	300 V	300 V		
Current	20 A	20 A		

LR 				

BV 				

**1804894 PC 4/12-G-7,62**

---

RS 

EAC 

DNV GL

cULus Recognized 

**1804894 PC 4/12-G-7,62****16 Commercial Data**

Order No.	1804894
Type	PC 4/12-G-7,62
Pieces per package	50
Net weight	20.988 g
GTIN	4017918046330
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**17 corresponding plugs**

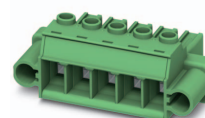
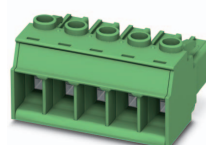
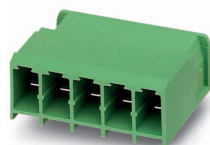
Order No.	Type
1805000	PC 4/12-ST-7,62
1840094	PCC 4/12-ST-7,62

**18 Accessories**

Description	Order 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
Mounting flange, is snapped onto the left and right of the headers, for screw connection with PC 4/...-STF-7.62	1827570	BF-PC 4
	1968387	POWERCOMBICON PCB-SHIELD

## 1804894 PC 4/12-G-7,62

## 19 Combination tests



	<b>PC 4/..-G</b>	<b>PC 4/..-ST</b>	<b>PC 4/..-STF</b>	<b>PC 5/..-ST1</b>	<b>PC 5/..-STF1</b>
Specification		IEC 61984	IEC 61984	IEC 61984	IEC 61984
<b>Mechanical tests (A)</b>					
Insertion/withdrawal force per position		approx. 8 N / 5 N	approx. 8 N / 5 N	approx. 8 N / 6 N	approx. 8 N / 6 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>		0.5 mΩ	0.5 mΩ	0.45 mΩ	0.45 mΩ
Insertion/withdrawal cycles		50	50	50	50
Contact resistance R <sub>2</sub>		0.6 mΩ	0.6 mΩ	0.6 mΩ	0.6 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		12 TΩ	12 TΩ	>10 <sup>12</sup> Ω	>10 <sup>12</sup> Ω
<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		
Upper limiting temperature Requirements < 100°C		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	Back of hand safety with IP10 access probe	Back of hand safety with IP10 access probe	Back of hand safety with IP10 access probe

**1804894 PC 4/12-G-7,62****PC 4/..-G**

Specification

**Mechanical tests (A)**

Insertion/withdrawal force per position

Polarization when inserted  
Requirement >20 NContact holder in insert  
Requirements >20 N**Durability tests (B)**Contact resistance  $R_1$ 

Insertion/withdrawal cycles

Contact resistance  $R_2$ Rated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ Insulation resistance  
Requirements > 5 M $\Omega$ **Thermal tests (C)**

Tested number of positions

Tested conductor cross section

Test current

Upper limiting temperature  
Requirements < 100°C**Climatic tests (D)**

Test sequence 1: low temperature storage

Test sequence 2: heat storage

Test sequence 3: noxious gas storage  
(ISO 6988)Rated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ **Environmental and endurance tests (E)**

Specification

Degree of protection

**PC 4/..-STF**

IEC 61984

approx. 9 N / 6 N

Test passed

Test passed

0.6 m $\Omega$ 

25

0.7 m $\Omega$ 

7.3 kV

3.31 kV

> 0.2 T $\Omega$ 

12

4 mm<sup>2</sup>

20 A

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm<sup>3</sup> SO<sub>2</sub> on 300 dm<sup>3</sup>/  
40 °C/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

Finger safety with IP20  
test finger