

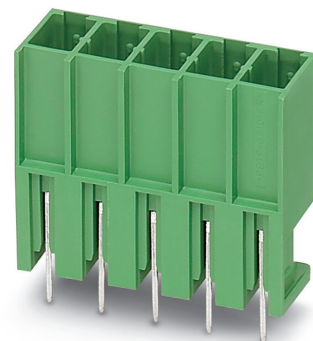
Data sheet

2021-09-08
Product version 04
Document revision 00

Order No.: 1804726

Type: PCV 4/ 6-G-7,62

PCB headers



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

1 Main features



- | | | | |
|-------------------------|-------------------|------------------------|---------------------|
| • No. of pos. | 6 | • Nominal current | 20 A |
| • Nominal cross section | 4 mm ² | • Nominal voltage | 630 V |
| • Color | green (6021) | • Connection direction | 90 ° |
| • Pitch | 7.62 mm | • Type of packaging | packed in cardboard |
| • Mounting type | Wave soldering | | |

2 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
- ✓ Easy PCB replacement thanks to plug-in modules



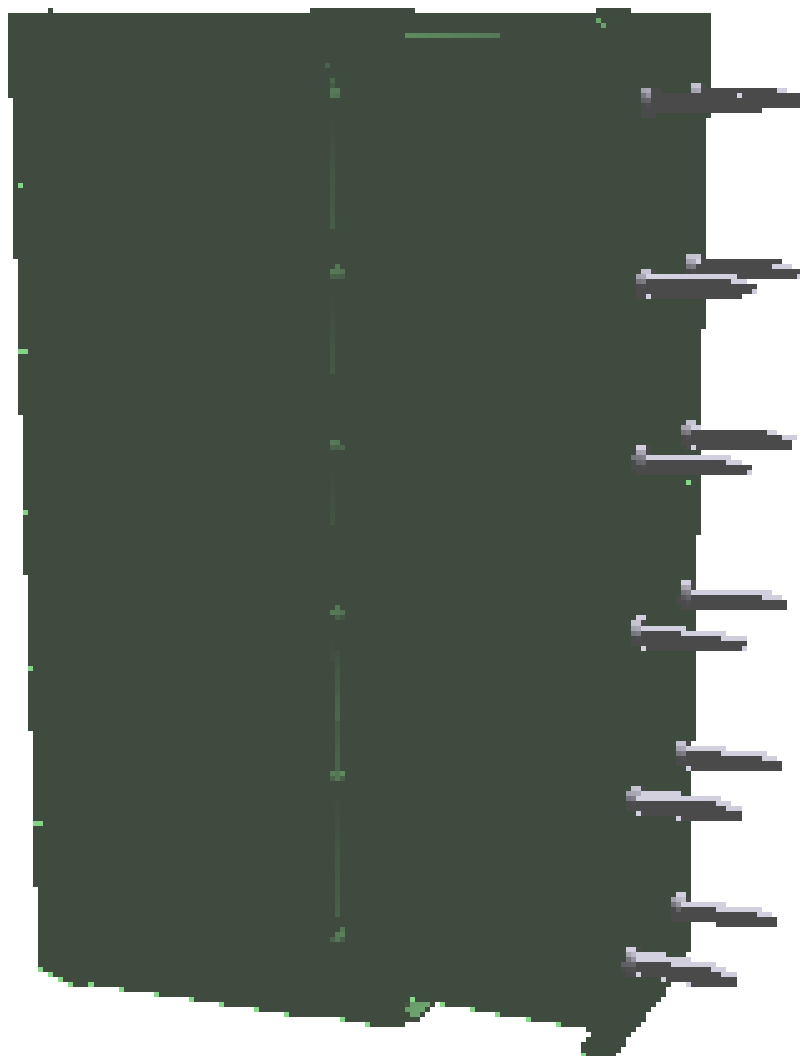
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1804726

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1804726 PCV 4/ 6-G-7,62

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



1804726 PCV 4/ 6-G-7,62**5 General Technical Data****5.1 item properties**

Order No.	1804726
Type	PCV 4/ 6-G-7,62
Connector system	POWER COMBICON 4
Product type	PCB headers
Type of contact	Male connector
Range of articles	PCV 4/..-G
Pitch	7.62 mm
Number of positions	6
Number of rows	1
Number of connections	6
Number of potentials	6
Mounting type	Wave soldering
Connection direction of the connector to the PCB	90 °
Pin layout	Linear pinning
Solder pins per potential	2
Product note	Mounting flange: Accessory Order No. 1827570
Type	Standard

1804726 PCV 4/ 6-G-7,62**6 Mounting****6.1 Flange mounting**

Type of locking	without
Mounting flange	without

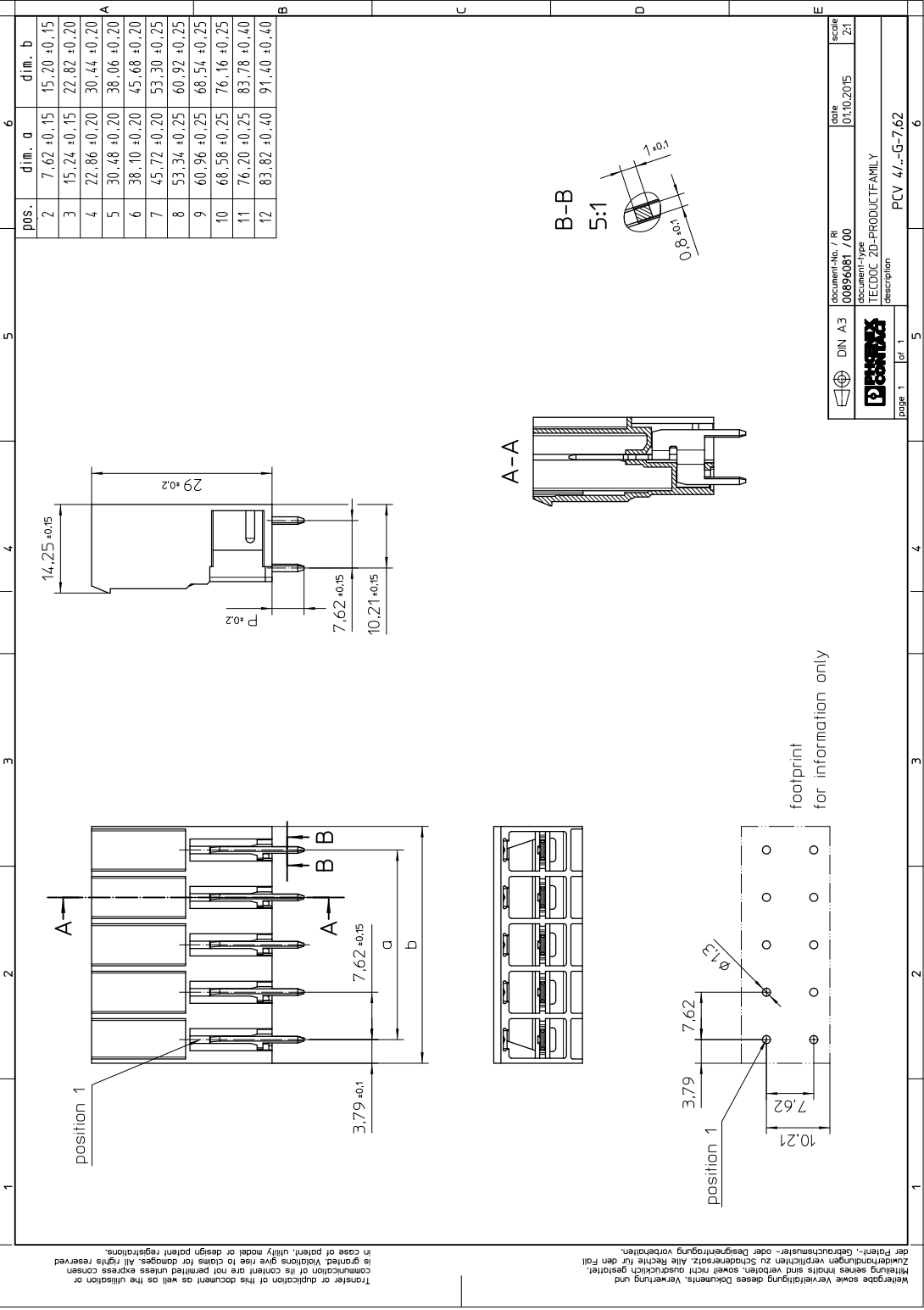
7 Material properties**7.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface contact area	Nickel (2 - 5 µm Ni) , Tin (5 - 10 µm Sn)
Soldering area surface	Nickel (2 - 5 µm Ni) , Tin (5 - 10 µm Sn)
Surface characteristics	Tin-plated
Insulating material data	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

1804726 PCV 4/ 6-G-7,62**8 Dimensions****8.1 Dimensions for the product**

Length	14.25 mm
Width	45.68 mm
Height (without solder pin)	29 mm
Total height	34 mm
Solder pin [P]	5 mm

9 Series drawing



1804726 PCV 4/ 6-G-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 information**

Type of packaging

packed in cardboard

Pieces per package

50

12.1 Temperature limit values

Ambient temperature (storage/transport)

-40 °C ... 70 °C

Ambient temperature (assembly)

-5 °C ... 100 °C

Ambient temperature (operation)

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

1804726 PCV 4/ 6-G-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

1804726 PCV 4/ 6-G-7,62**14 Insertion and withdrawal forces**

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.		6 N

1804726 PCV 4/ 6-G-7,62**15 Electrical tests**

Rated current / conductor cross section	20 A / 4 mm ²
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Contact resistance	0.45 mΩ
Degree of pollution	2

15.1 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 60112:2003-01)	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 mm	3.2 mm	3.2 mm

1804726 PCV 4/ 6-G-7,62

16 Current carrying capacity/derating curves

Specification

IEC 61984:2008-10

Note

Representation based on IEC 60512-5-2:2002-02

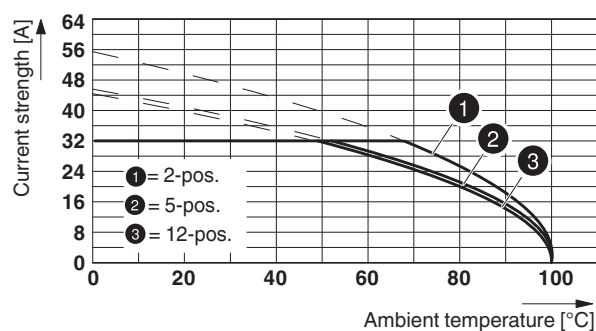
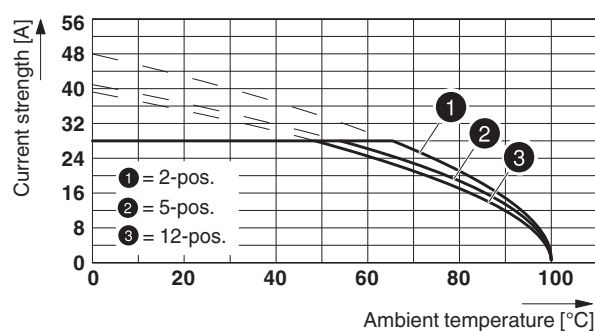
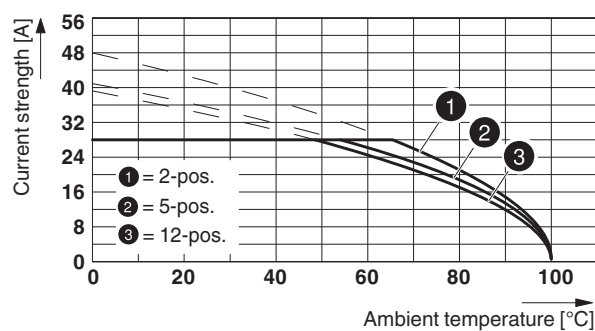
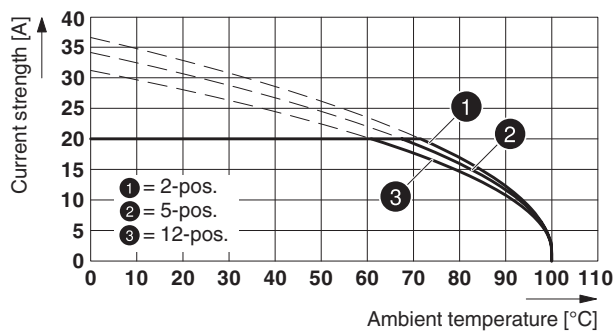
Note

For number of positions, see diagram

Reduction factor

0.8

Conductor cross section

4 mm²**Derating curve for: PC 5/...-ST1-7,62 with PCV 4/...-G-7,62****Conductor cross section: 4 mm²****Type: PC 5/...-STF1-7,62 with PCV 4/...-G-7,62 and BF-PC 4****Conductor cross section: 4 mm²****Type: PC 4/...-STF-7,62 with PCV 4/...-G-7,62 and BF-PC 4**

1804726 PCV 4/ 6-G-7,62**17 Environmental and durability tests****17.1 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	5g (60.1 - 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.

17.2 Insulation resistance

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

1804726 PCV 4/ 6-G-7,62

18 Approvals / Certificates

CSA 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
Usegroup B				
	300 V	20 A	-	-
Usegroup C				
	300 V	20 A	-	-
EAC 				
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
Usegroup B				
	300 V	30 A	-	-
Usegroup C				
	300 V	30 A	-	-
DNV GL 				
LR 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
	-	-	-	-
RS 				
BV 				

1804726 PCV 4/ 6-G-7,62**19 Commercial Data**

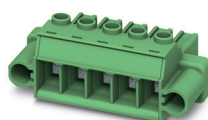
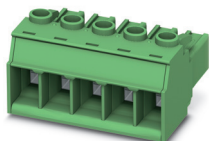
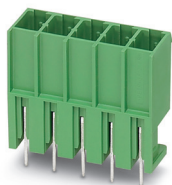
Order No.	1804726
Type	PCV 4/ 6-G-7,62
Pieces per package	50
Net weight	11.229 g
GTIN	4017918046163
	Information that applies locally, see link on page 1

20 Accessories

Description	Order No.	Type
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
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
	0803906	SK U/3,8 WH:UNBEDRUCKT
	0805153	SK 7,62/3,8:SO
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT

1804726 PCV 4/ 6-G-7,62

21 Combination tests

**PCV 4/...-G**

IEC 61984

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 1st levelContact resistance R_1 2nd level

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 $\geq (50/60 \text{ Hz})$ **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 5/...-ST1

IEC 61984

approx. 8 N / 6 N

Test passed

Test passed

0.45 mΩ

50

0.6 mΩ

7.3 kV

3.31 kV

12

4 mm²

32 A

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

Finger safety with IP20
test finger**PC 5/...-STF1**

IEC 61984

approx. 8 N / 6 N

Test passed

Test passed

0.45 mΩ

50

0.6 mΩ

7.3 kV

3.31 kV

12

4 mm²

28 A

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

Finger safety with IP20
test finger**PC 4/...-STF**

IEC 61984

approx. 9 N / 6 N

Test passed

Test passed

0.6 mΩ

25

0.7 mΩ

7.3 kV

3.31 kV

12

4 mm²

20 A

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

Finger safety with IP20
test finger