

# Data sheet

Order No.: 1717103

Type: PCH 6/ 3+4-G-7,62

PCB hybrid header

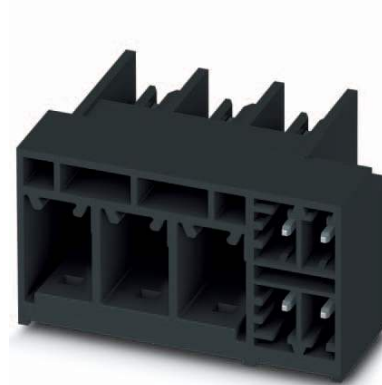
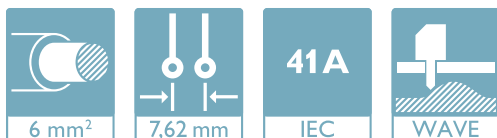


Figure shows a 3+4-pos. version

## 1 Main features



- |                         |                   |                        |                     |
|-------------------------|-------------------|------------------------|---------------------|
| • No. of pos.           | 7                 | • Nominal current      | 41 A                |
| • Nominal cross section | 6 mm <sup>2</sup> | • Nominal voltage      | 630 V               |
| • Color                 | black (9005)      | • Connection direction | 0 °                 |
| • Pitch                 | 7.62 mm           | • Type of packaging    | packed in cardboard |
| • Mounting type         | Wave soldering    |                        |                     |

## 2 Your advantages

- ✓ Combining signals and power in a single header saves time and space
- ✓ Easy PCB replacement thanks to plug-in modules
- ✓ Well-known mounting principle allows worldwide use



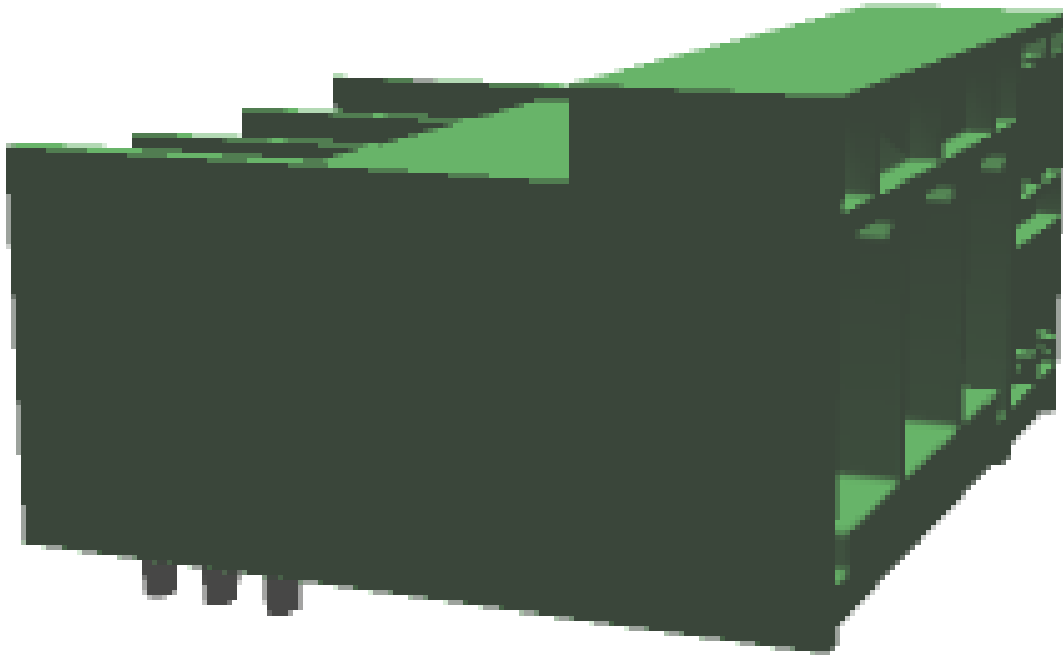
Make sure you always use the latest documentation.

It can be downloaded at: [phoenixcontact.net/product/1717103](https://phoenixcontact.net/product/1717103)

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



**1717103 PCH 6/ 3+4-G-7,62****5 General Technical Data****5.1 item properties**

Order No.	1717103	
Type	PCH 6/ 3+4-G-7,62	
Plug-in system	POWER COMBICON 6 Hybrid	
Product type	PCB hybrid header	
Type of contact	Male connector	
Range of articles	PCH 6/..-G	
Number of positions	7	
Number of connections	7	
Number of potentials	7	
Type of locking	without	
Mounting type	Wave soldering	
Connection direction of the connector to the PCB	0 °	
	<b>Power</b>	<b>Signal</b>
Pitch	7.62 mm	3.81 mm
Number of levels	1	2
Number of positions	3	4
Number of connections	3	4
Number of potentials	3	4

**1717103 PCH 6/ 3+4-G-7,62****6 Material properties****6.1 Material of metal parts**

	Power	Signal
Contact material	Cu alloy	Cu alloy
Surface contact area	Nickel (1.3 - 3 µm Ni)	Nickel (1.3 - 3 µm Ni)
	Tin (2 - 4 µm Sn)	Tin (2 - 4 µm Sn)
Soldering area surface	Nickel (1.3 - 3 µm Ni)	Nickel (1.3 - 3 µm Ni)
	Tin (2 - 4 µm Sn)	Tin (2 - 4 µm Sn)
Surface characteristics	Tin-plated	Tin-plated

**6.2 Material Kunststoffteile**

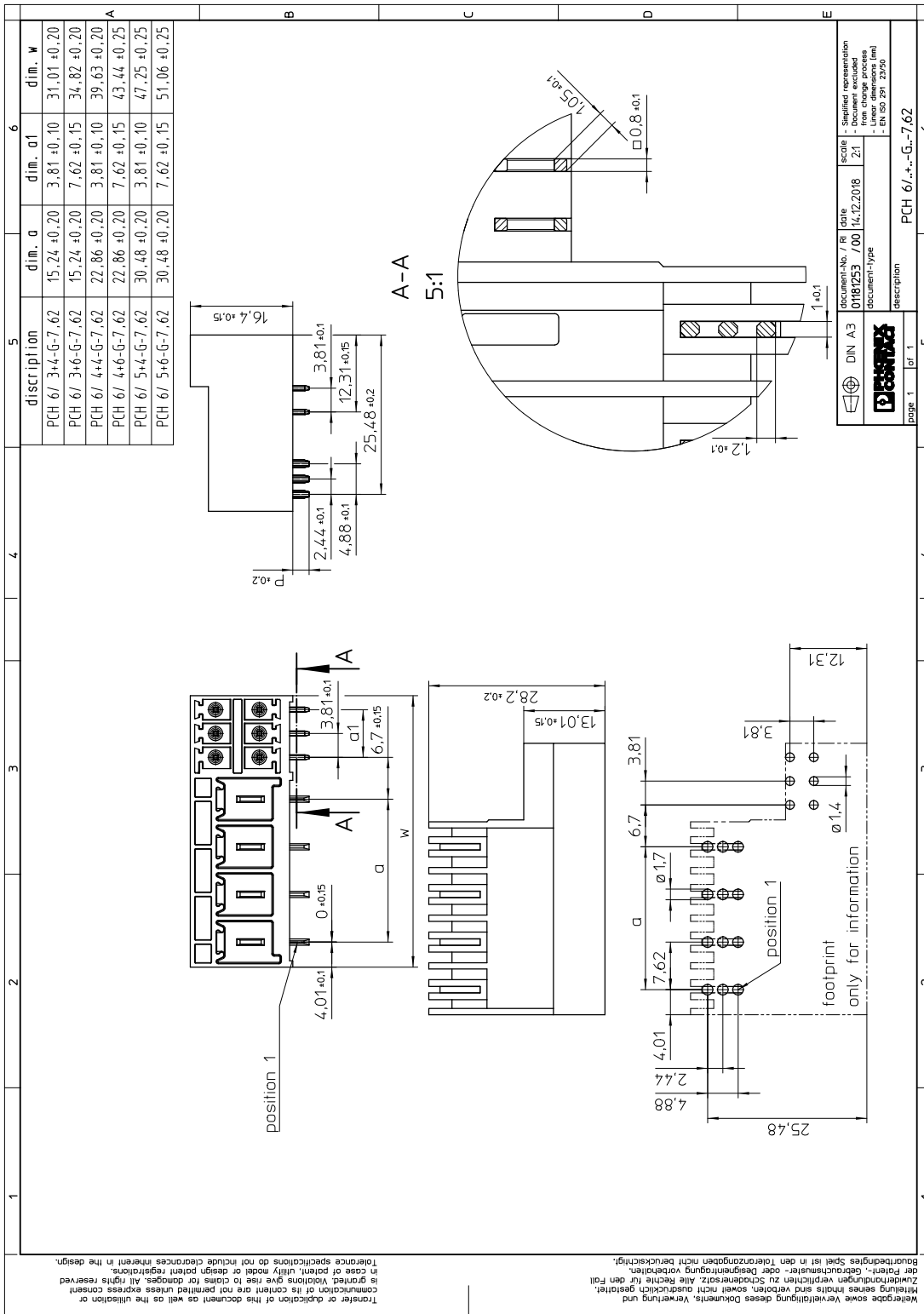
	Power	Signal
Insulating material	PA GF	PA GF
Insulating material group	I	I
CTI according to IEC 60112	600	600
Flammability rating according to UL 94	V0	V0
Color	black (9005)	black (9005)

**1717103 PCH 6/ 3+4-G-7,62****7 Dimensions****7.1 Dimensions for the product**

Length	28.2 mm	
Width	31.01 mm	
Height (without solder pin)	16.4 mm	
Total height	19 mm	
Solder pin [P]	2.6 mm	
Dimension a	15.24 mm	
	<b>Power</b>	<b>Signal</b>
Solder pin [P]	2.6 mm	2.6 mm
Pin dimensions	1 x 1.2 mm	0.8 x 0.8 mm
Dimension a	15.24 mm	15.24 mm

1717103 PCH 6/ 3+4-G-7,62

8 Series drawing



**1717103 PCH 6/ 3+4-G-7,62****9 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	50

**10 Application****10.1 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)



**1717103 PCH 6/ 3+4-G-7,62****11 Mechanical tests**

Mechanical test group A	
Specification	IEC 61984:2008-10
Visual examination	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	25
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	4 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.	20 N

**1717103 PCH 6/ 3+4-G-7,62****12 Electrical tests****12.1 Electrical data**

Rated current / conductor cross section	41 A 6 mm <sup>2</sup>
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Contact resistance	0.42 mΩ
Degree of pollution	2

**12.2 Air and creepage distances**

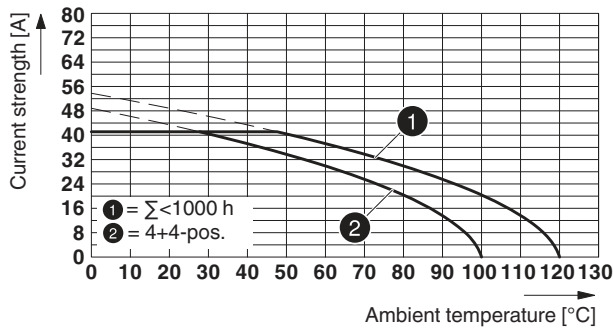
Component	Header		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	630 V	630 V	1000 V
Rated surge voltage	6 kV	6 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	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	3.2 mm	5 mm

## 1717103 PCH 6/ 3+4-G-7,62

## 13 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	6 mm <sup>2</sup>

## Type: LPCH 6/...+...-ST-7,62 with PCH 6/...+...-G-7,62




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

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

## 14 Approvals

cULus Recognized 			
Use group	B1	F	F1
mm <sup>2</sup> /AWG/kcmil			
Voltage	300 V	600 V	160 V
Current	6 A	35 A	6 A

**1717103 PCH 6/ 3+4-G-7,62****15 Commercial Data**

Order No.	1717103
Type	PCH 6/ 3+4-G-7,62
Pieces per package	50
Net weight	82 g
GTIN	4055626530512
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**16 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

## 1717103 PCH 6/ 3+4-G-7,62

## 17 Combination tests

**PCH 6/...-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  $R_1$ 

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

**LPCH 6/...-ST**

IEC 61984

approx. 7 N / 4 N

Test passed

Test passed

0.42 m $\Omega$ 

25

0.46 m $\Omega$ 

7.3 kV

3.31 kV

4

6 mm<sup>2</sup>

41 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

Back of hand safety with  
IP10 access probe