

Data sheet

2019-03-15
Product version 01
Document revision 00

Order No.: 1717103

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

PCB hybrid header

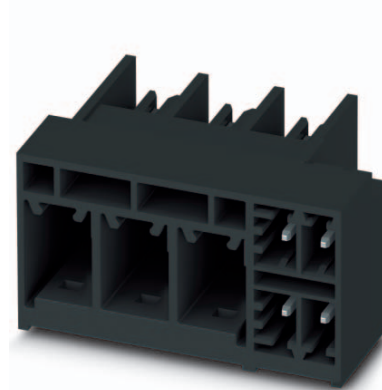
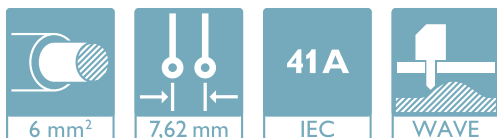


Figure shows a 3+4-pos. version

1 Main features



- | | | | |
|-------------------------|-------------------|------------------------|---------------------|
| • No. of pos. | 7 | • Nominal current | 41 A |
| • Nominal cross section | 6 mm ² | • 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



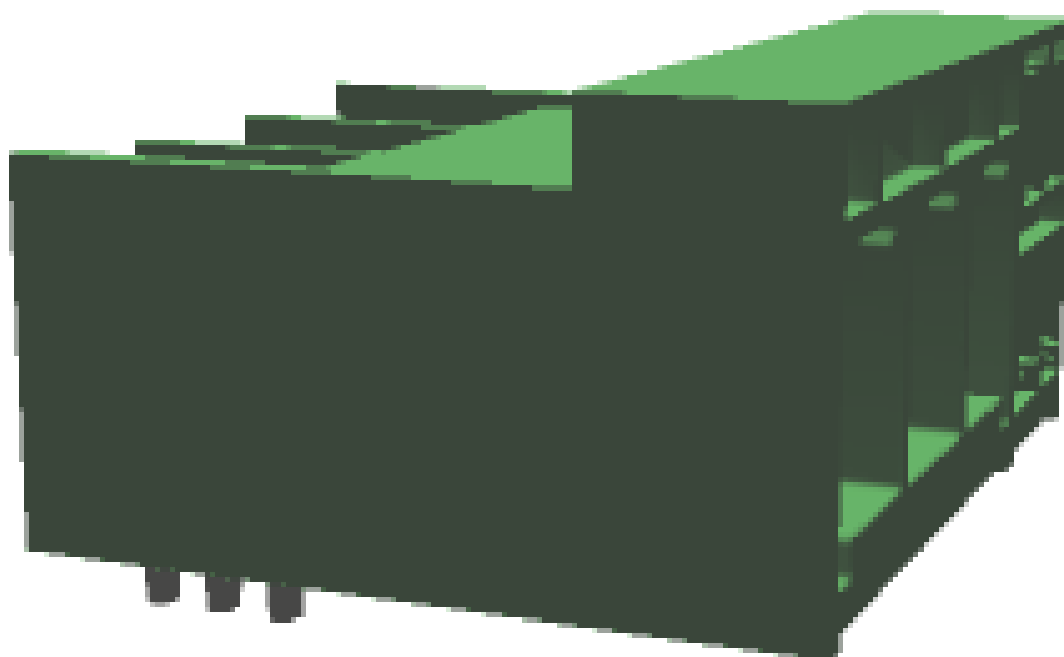
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1717103

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

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	
	without	
Mounting type	Wave soldering	
Connection direction of the connector to the PCB	0 °	
	Power	Signal
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) Tin (2 - 4 µm Sn)	Nickel (1.3 - 3 µm Ni) Tin (2 - 4 µm Sn)
Soldering area surface	Nickel (1.3 - 3 µm Ni) Tin (2 - 4 µm Sn)	Nickel (1.3 - 3 µm Ni) 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	
	Power	Signal
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

8 Series drawing

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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 ²
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

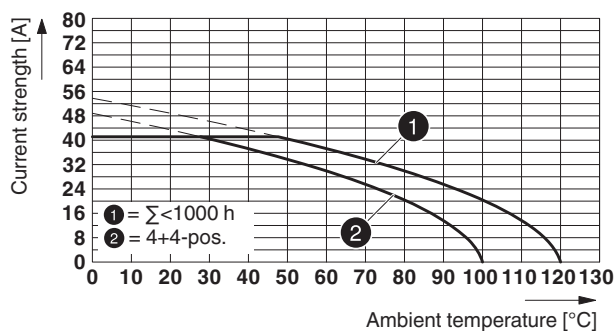
Component	Header		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	630 V	630 V	1000 V
Rated surge voltage	6 kV	6 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III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

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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 ²

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 

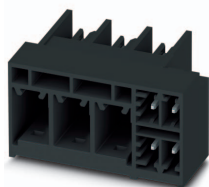
Use group	B1	F	F1	
mm ² /AWG/kcmil				
Voltage	300 V	600 V	160 V	
Current	6 A	35 A	6 A	

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)**

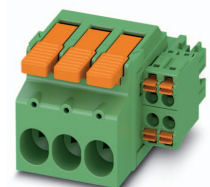
Test sequence 1: low temperature storage

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 mΩ

25

0.46 mΩ

7.3 kV

3.31 kV

4

6 mm²

41 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

Back of hand safety with
IP10 access probe