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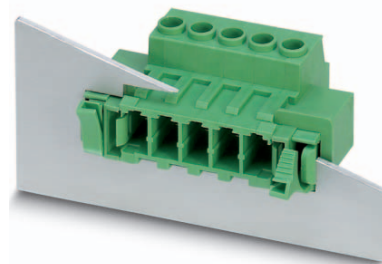


# Data sheet

Order No.: 1716506

Type: DFK-PC 5/ 2-ST-7,62

Plug component, Screw connection with tension sleeve



## 1 Main features



• No. of pos.	2	• Nominal current	41 A
• Conductor cross section	6 mm <sup>2</sup>	• Nominal voltage	1000 V
• Color	green	• 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
- ✓ Flange system enables secure fixing to the housing panel by means of tool-free snap-in locking or screws



Make sure you always use the latest documentation.

It can be downloaded at: [phoenixcontact.net/product/1716506](http://phoenixcontact.net/product/1716506)

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1716506 DFK-PC 5/ 2-ST-7,62

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



**1716506 DFK-PC 5/ 2-ST-7,62****5 item properties**

Order No.	1716506
Type	DFK-PC 5/ 2-ST-7,62
Type of contact	Male connector
Range of articles	DFK-PC 5/...ST
Pitch	7.62 mm
Number of positions	2
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted
Screw thread	M3
Tightening torque	0.7 Nm ... 0.8 Nm
Locking	without

**5.1 Connection capacity**

Conductor cross section, solid	0.2 mm <sup>2</sup> to 10 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> to 6 mm <sup>2</sup>
Conductor cross section AWG/kcmil	24 to 10
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded	0.2 mm <sup>2</sup> to 4 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> to 6 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> to 4 mm <sup>2</sup>
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.25 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.4 mm
Stripping length	10 mm

**5.2 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
Terminal point surface	Sn 4 µm ... 8 µm
Surface contact area	Sn 4 µm ... 8 µm
Surface characteristics	hot-dip 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**

**1716506 DFK-PC 5/ 2-ST-7,62**

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Length	48.93 mm
Width	40.74 mm
Total height	26.24 mm
Dimension a	7.62 mm



**1716506 DFK-PC 5/ 2-ST-7,62**

## 8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	10
Outer packaging type	Carton

## 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)



**1716506 DFK-PC 5/ 2-ST-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.	6 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	
Specification	
Test force per pos.	

**10.1 Termination and connection method**

Specification	IEC 60999-1:1999-11
Conductor connection	Test passed
Repeated connection and disconnection	Test passed
Check for damage to conductor or loosening	Test passed

**10.2 Pull-out test**

Termination and connection method: 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> / stranded / > 10 N
Conductor cross section/conductor type/tractive force actual value	6 mm <sup>2</sup> / solid / > 80 N
Conductor cross section/conductor type/tractive force actual value	
Conductor cross section/conductor type/tractive force actual value	AWG 10 / stranded / > 80 N

**1716506 DFK-PC 5/ 2-ST-7,62****11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	41 A / 6 mm <sup>2</sup>
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Contact resistance	0.5 mΩ
Degree of pollution	2

**11.2 Air and creepage distances**

Component	Plug component		
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	1000 V	1000 V	1000 V
Rated surge voltage	8 kV	8 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	8 mm	8 mm	5.5 mm
Minimum value of the creepage path requirement in acc. with table	8 mm	8 mm	5.5 mm

**11.3 Electrical function**

Specification	IEC 60999-1:1999-11
Result	Test passed
Voltage drop	Voltage drop (U) after the load ≤ 15 mV
Test current (minimum cross section)	5 A DC
Test current (maximum cross section)	32 A DC
Conductor cross section, flexible	0.2 mm <sup>2</sup> to 6 mm <sup>2</sup>
Conductor cross section, solid	0.2 mm <sup>2</sup> to 10 mm <sup>2</sup>

**11.4 Temperature cycles**

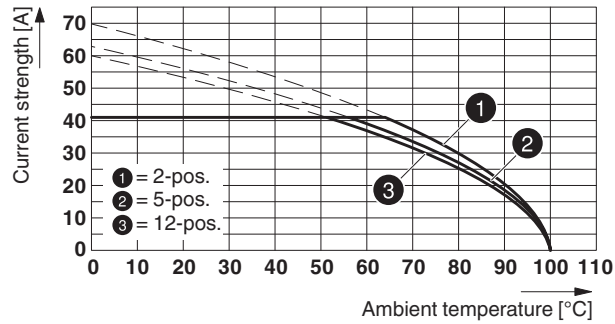
Specification	IEC 60999-1:1999-11
Result	Test passed
Voltage drop	Voltage drop (U) after the load ≤ 22.5 mV or 1.5 x U <sub>after 24 h</sub> The small value is to be used.
Test current (minimum cross section)	5 A DC
Test current (maximum cross section)	32 A DC
Temperature cycles	192
Conductor cross section, flexible	0.2 mm <sup>2</sup> to 6 mm <sup>2</sup>
Conductor cross section, solid	0.2 mm <sup>2</sup> to 10 mm <sup>2</sup>

## 1716506 DFK-PC 5/ 2-ST-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	6 mm <sup>2</sup>

**Type: SPC 5/..-ST-7,62 with DFK-PC 5/..-ST-7,62**




**1716506 DFK-PC 5/ 2-ST-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
Connection method	Can be reconnected
Protection against electric shock	Not encapsulated - touch-proof when inserted
Protective conductor	without PE
Lock	no
Connection method	Screwless terminal points

**15 Approvals**

UL Recognized 				
Use group	B	C		
mm <sup>2</sup> /AWG/kcmil	24-8	24-8		
Voltage	600 V	600 V		
Current	41 A	41 A		

cUL Recognized 				
Use group	B	C		
mm <sup>2</sup> /AWG/kcmil	24-8	24-8		
Voltage	600 V	600 V		
Current	41 A	41 A		

EAC 				
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cULus Recognized 				
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**1716506 DFK-PC 5/ 2-ST-7,62****16 Commercial Data**

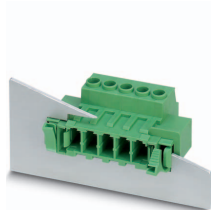
Order No.	1716506
Type	DFK-PC 5/ 2-ST-7,62
Pieces per package	10
Net weight	18.18 g
GTIN	4046356137126
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**17 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
Screw set for DFK-PC 16... connectors	1705449	DFK-PC 16-SS
Screwdriver, PZ crosshead, VDE insulated, size: PZ 1 x 80 mm, 2-component grip, with non-slip grip	1206450	SZK PZ1 VDE
	0804549	SK 7,62/3,8:FORTL.ZAHLEN
	0825128	SK 3,8 REEL P7,62 WH CUS
	0803906	SK U/3,8 WH:UNBEDRUCKT
	0805218	SK 3,8 WH:REEL

## 1716506 DFK-PC 5/ 2-ST-7,62

## 18 Combination tests

**DFK-PC 5/...-ST**

Specification

**SPC 5/...-ST**

IEC 61984

**PC 5/...-ST1**

IEC 61984

**Mechanical tests (A)**

Insertion/withdrawal force per position

approx. 6 N / 4 N

Polarization when inserted  
Requirement >20 N

Test passed

**Durability tests (B)**Contact resistance  $R_1$ 0.5 m $\Omega$ 

Insertion/withdrawal cycles

50

Contact resistance  $R_2$ 0.6 m $\Omega$ Rated impulse voltage at sea level  
Voltage waveform  $\geq$  (1.2/50  $\mu$ s)

9.8 kV

Power-frequency withstand voltage  
Voltage waveform  $\geq$  (50/60 Hz)

4.26 kV

Insulation resistance  
Requirements > 5 M $\Omega$ > 14 T $\Omega$ **Thermal tests (C)**

Tested number of positions

12

Tested conductor cross section

6 mm<sup>2</sup>

Test current

32 A DC

Upper limiting temperature  
Requirements < 100°C

Test passed

**Climatic tests (D)**

Test sequence 1: low temperature storage

-40 °C/2 h

Test sequence 2: heat storage

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 cycleRated impulse voltage at sea level  
Voltage waveform  $\geq$  (1.2/50  $\mu$ s)

9.8 kV

Power-frequency withstand voltage  
Voltage waveform  $\geq$  (50/60 Hz)

4.26 kV

**Environmental and endurance tests (E)**

Specification

IEC 61984:2008-10

Degree of protection

Finger safety with IP20  
test finger