

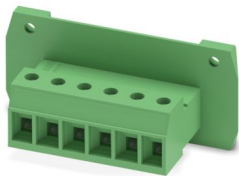
# DFK-PC 4/ 6-GF-7,62 - Feed-through plug



1840599

<https://www.phoenixcontact.com/us/products/1840599>

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Feed-through connector, nominal cross section: 4 mm<sup>2</sup>, color: green, nominal current: 20 A, rated voltage (III/2): 630 V, contact surface: Sn, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: DFK-PC 4/...-GF, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Direct mounting, conductor/PCB connection direction: 0 °, number of solder pins per potential: 1, plug-in system: COMBICON PC 4, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: packed in cardboard

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Screwable flange for superior mechanical stability
- Flexible side panels enable convenient panel mounting prewired from the inside

## Commercial data

Item number	1840599
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA04
Product key	AADWCA
GTIN	4017918111748
Weight per piece (including packing)	26 g
Weight per piece (excluding packing)	24.802 g
Customs tariff number	85366990
Country of origin	PL

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## Technical data

### Product properties

Product type	Feed-through connector
Product family	DFK-PC 4/..-GF
Product line	COMBICON Connectors L
Type	Feed-through header
Number of positions	6
Pitch	7.62 mm
Number of connections	6
Number of rows	1
Number of potentials	6
Mounting type	Threaded flange
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current $I_N$	20 A
Nominal voltage $U_N$	630 V
Contact resistance	0.4 m $\Omega$
Rated voltage (III/3)	400 V
Rated surge voltage (III/3)	6 kV
Rated voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Connection data

#### Connection technology

Type	Feed-through header
Connector system	COMBICON PC 4
Nominal cross section	4 mm <sup>2</sup>
Contact connection type	Pin

#### Interlock

Locking type	Screw locking mechanism
Mounting type	Threaded flange

#### Conductor connection

Connection method	Screw connection with tension sleeve
Connection direction of the conductor to plug-in direction	0 °
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>

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Conductor cross-section AWG	24 ... 10
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.0 mm
Stripping length	7 mm
Drive form screw head	Slotted (L)
Tightening torque	0.5 Nm ... 0.6 Nm

## Mounting

Mounting type	Direct mounting
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## Material specifications

### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (5 µm - 7 µm Sn)
Metal surface contact area (top layer)	Tin (5 µm - 7 µm Sn)

### Material data - housing

Color (Housing)	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

## Notes

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.
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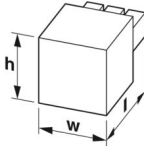
## Dimensions

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Dimensional drawing	
Pitch	7.62 mm
Width [w]	67.34 mm
Height [h]	30.5 mm
Length [l]	32 mm
Installed height	30.5 mm

## Mechanical tests

### Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

### Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross-section/conductor type/tractive force setpoint/actual value	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	4 mm <sup>2</sup> / solid / > 60 N
	4 mm <sup>2</sup> / flexible / > 60 N

### Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

### Torque test

Specification	IEC 60999-1:1999-11
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### Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

### Polarization and coding

Specification	IEC 60512-7:1993-08 (Polarization)
Result	Test passed

### Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

### Dimension check

Specification	IEC 60512-1-2:2002-02
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Result	Test passed
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## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	12

### Insulation resistance

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

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	400 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	5.5 mm
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
minimum clearance value - non-homogenous field (III/2)	5.5 mm
minimum creepage distance (III/2)	5.5 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

## Environmental and real-life conditions

### Durability test

Specification	IEC 60512-5:1992-08
Impulse withstand voltage at sea level	7.3 kV
Contact resistance $R_1$	0.4 m $\Omega$
Contact resistance $R_2$	0.6 m $\Omega$
Insertion/withdrawal cycles	25

### Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	KFW 0.2 S/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	3.31 kV

### Vibration test

Specification	IEC 60068-2-6:1995-03
Frequency	10 - 150 - 10 Hz

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Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

## Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

## Ambient conditions

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Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
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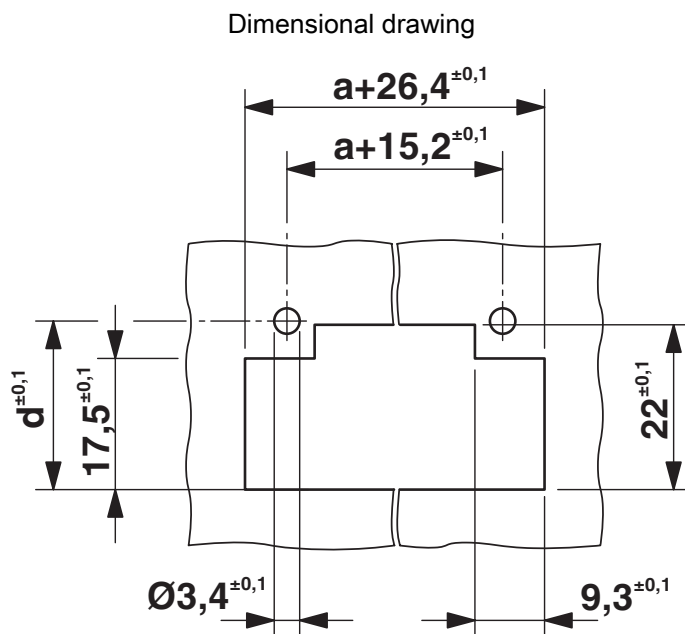
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## Drawings



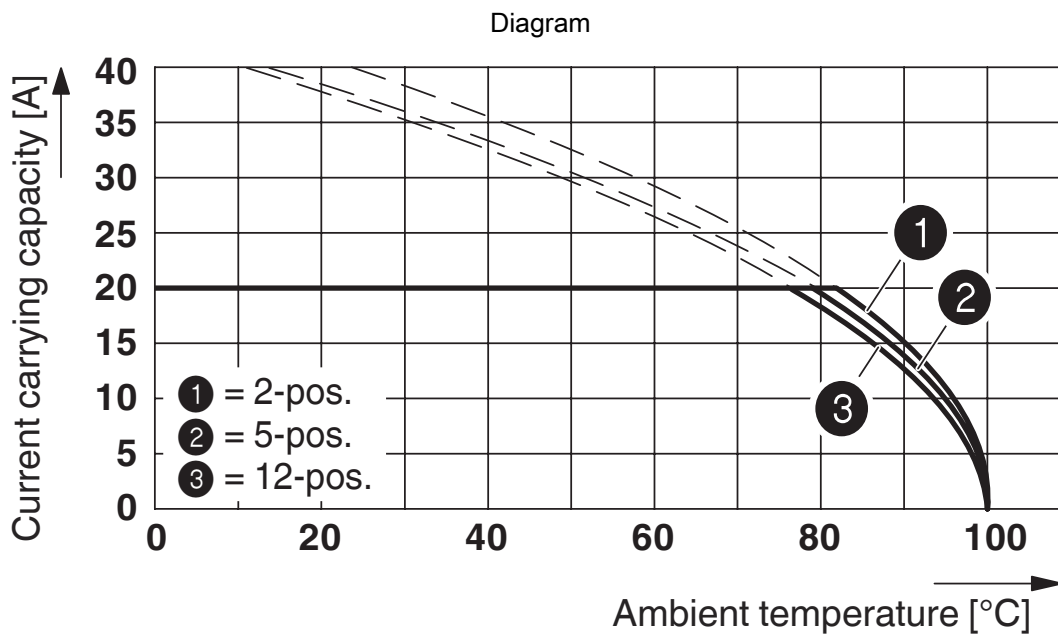
Dimension d depending on the wall thickness (W) in mm: W=1: d=21.4

W=2: d=21.9

W=3: d=22.5

W=4: d=23.1

W=5: d=23.7



Type: PC 4/...-STF-7,62 with DFK-PC 4/...-GF-7,62

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1840599>

 <b>CSA</b> Approval ID: 2355836				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	300 V	20 A	28 - 10	-
C	300 V	20 A	28 - 10	-

 <b>cULus Recognized</b> Approval ID: E60425-19920722				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	300 V	35 A	30 - 10	-
C	300 V	35 A	30 - 10	-
D	600 V	5 A	30 - 10	-

 <b>DNV GL</b> Approval ID: TAE00001EZ				
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## Classifications

### ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

### ETIM

ETIM 10.0	EC002638
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	5b7cb0a8-35f7-436e-a0e1-41ef189b7abd

### EF3.1 Climate Change

CO2e kg	0.138 kg CO2e
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