

# DFK-IPC 16/ 7-GF-10,16 - Feed-through header



1702785

<https://www.phoenixcontact.com/us/products/1702785>

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

Feed-through header, nominal cross section: 16 mm<sup>2</sup>, color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Ag, contact connection type: Socket, number of potentials: 7, number of rows: 1, number of positions: 7, number of connections: 7, product range: DFK-IPC 16/...-GF, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.8 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: packed in cardboard

## Your advantages

- Well-known mounting principle allows worldwide use
- Flange system enables secure fixing to the housing panel by means of tool-free snap-in locking or screws
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections
- Shroud for professional EMC shield connection on the front of the device
- Screwable flange for superior mechanical stability
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations

## Commercial data

Item number	1702785
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	AA05
Product key	AAEWAB
GTIN	4046356031370
Weight per piece (including packing)	39.4 g
Weight per piece (excluding packing)	35.316 g
Customs tariff number	85366990
Country of origin	PL

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## Technical data

### Product properties

Product type	Feed-through header
Product family	DFK-IPC 16/..-GF
Product line	COMBICON Connectors XL
Type	Feed-through header
Number of positions	7
Pitch	10.16 mm
Number of connections	7
Number of rows	1
Number of potentials	7
Mounting type	Threaded flange
Pin layout	Linear pinning
Solder pins per potential	3

### Electrical properties

#### Properties

Nominal current $I_N$	76 A
Nominal voltage $U_N$	1000 V
Contact resistance	0.3 mΩ
Rated voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

### 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	completely silver-plated
Metal surface contact area (top layer)	Silver (4 μm - 8 μm Ag)
Metal surface soldering area (top layer)	Silver (4 μm - 8 μm Ag)

#### Material data - housing

Color (Housing)	green (6021)
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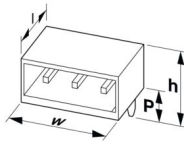
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Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	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

Dimensional drawing	
Pitch	10.16 mm
Width [w]	112.2 mm
Height [h]	21.6 mm
Length [l]	46.95 mm
Installed height	17.8 mm
Solder pin length [P]	3.8 mm
Pin dimensions	1.2 x 0.8 mm

## PCB design

Pin spacing	5.08 mm
Hole diameter	1.7 mm

## Mechanical tests

### Visual inspection

Specification	IEC 60512-1:2001-01
Result	Test passed

### Dimension check

Specification	IEC 60512-1:2001-01
Result	Test passed

### Resistance of inscriptions

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

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## Polarization and coding

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

## Contact holder in insert

Specification	IEC 60512-8:1993-01
Contact holder in insert Requirements >20 N	Test passed

## Insertion and withdrawal forces

Result	Test passed
No. of cycles	50
Insertion strength per pos. approx.	10 N
Withdraw strength per pos. approx.	9 N

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	9

### Insulation resistance

Specification	IEC 60512-2:1985-00
Insulation resistance, neighboring positions	$10^{12} \Omega$

### Air clearances and creepage distances | 1. Insulation coordination

Specification	IEC 61984:2008-10
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	8 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 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

### Air clearances and creepage distances | 2. Insulation coordination

Specification	IEC 60664-1:2020-05
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	630 V

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Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	8 mm
Rated insulation voltage (III/2)	1250 V DC
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1500 V DC
Rated surge voltage (II/2)	8 kV
minimum clearance value - non-homogenous field (II/2)	8 mm
minimum creepage distance (II/2)	8 mm

## Environmental and real-life conditions

### Durability test

Specification	IEC 60512-5:1992-08
Impulse withstand voltage at sea level	9.8 kV
Contact resistance $R_1$	0.3 m $\Omega$
Contact resistance $R_2$	0.4 m $\Omega$
Insertion/withdrawal cycles	50

### 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	4.26 kV

### Vibration test

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

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Ambient temperature (assembly)	-5 °C ... 100 °C
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## Packaging specifications

Type of packaging	packed in cardboard
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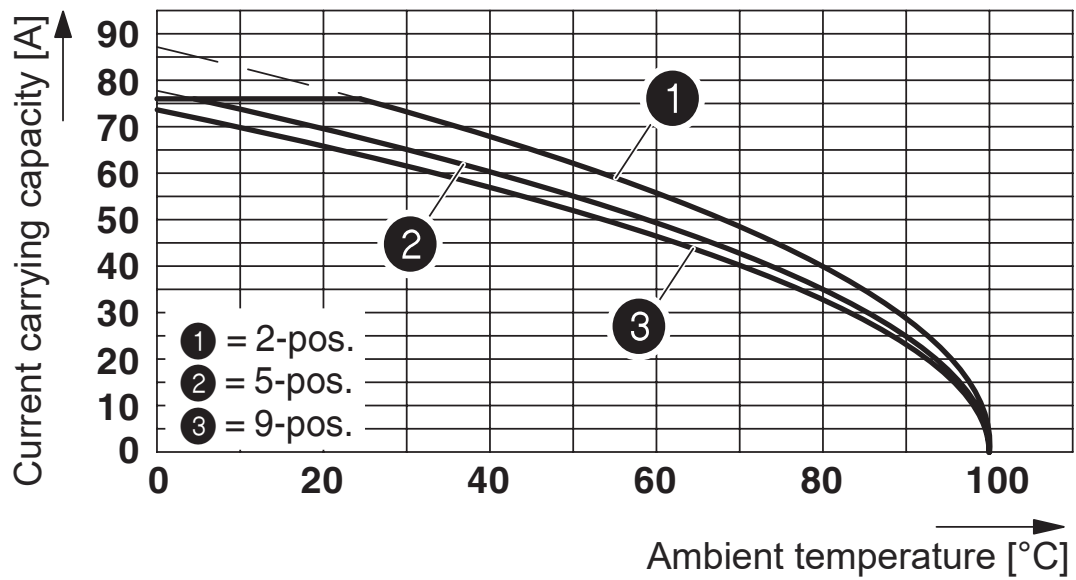
Type of packaging	packed in cardboard
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## Drawings

Diagram




Type: IPC 16/...-STF-10,16 with DFK-IPC 16/...-GF-10,16

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1702785>

 <b>cULus Recognized</b> Approval ID: E60425-20040202				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	300 V	55 A	-	-
C	300 V	55 A	-	-
D	600 V	5 A	-	-

 <b>VDE approval of drawings</b> Approval ID: 40055586				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine	1000 V	76 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

### ETIM

ETIM 10.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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### EF3.1 Climate Change

CO2e kg	0.379 kg CO2e
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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)