

DFK-IPC 16/ 3-GF-10,16 - Feed-through header



1702743

<https://www.phoenixcontact.com/de/produkte/1702743>

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Feed-through header, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, 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, mounting: 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 | 1702743 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales Key | E1 - Leiterplattenanschl. |
| Product Key | AAEWAB |
| Catalog Page | Page 579 (C-1-2013) |
| GTIN | 4046356031332 |
| Weight per Piece (including packing) | 26,71 g |
| Weight per Piece (excluding packing) | 21,64 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

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Technical Data

Product properties

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

Electrical properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 76 A |
| Nominal voltage U_N | 1000 V |
| Degree of pollution | 3 |
| Contact resistance | 0.3 mΩ |
| Rated voltage (III/3) | 1000 V |
| Rated surge voltage (III/3) | 8 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 - 8 μm Ag) |
| Metal surface soldering area (top layer) | Silver (4 - 8 μm Ag) |

Material data - housing

| | |
|---------------------|--------------|
| Color (Housing) | green (6021) |
| Insulating material | PA |

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| | |
|---|--------|
| 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 |

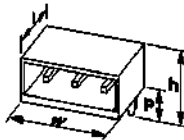
Material data – actuating element

| | |
|----------|----|
| Color () | () |
|----------|----|

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. |
|--------------------|--|

Dimensions

| | |
|-----------------------|--|
| Dimensional drawing |  |
| Pitch | 10.16 mm |
| Width [w] | 71.56 mm |
| Height [h] | 21.6 mm |
| Length [l] | 46.95 mm |
| Installed height | 17.8 mm |
| Solder pin length [P] | 3.8 mm |

PCB design

| | |
|-------------|---------|
| Pin spacing | 5.08 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 | 0.75 mm ² / solid / > 30 N |
| | 0.75 mm ² / flexible / > 30 N |
| | 16 mm ² / solid / > 100 N |
| | 16 mm ² / flexible / > 100 N |

Insertion and withdrawal forces

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

Torque test

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

Contact holder in insert

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

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 60512-1:2001-01 |
| Result | Test passed |

Dimension check

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

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 |

| | |
|--|---------------------|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 1000 V |
| Rated surge voltage (III/3) | 8 kV |
| minimum clearance value - non-homogenous field (III/3) | 8 mm |
| minimum creepage distance (III/3) | 12.5 mm |
| Rated insulation voltage (III/2) | 1000 V |

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| | |
|--|--------|
| 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 |

Environmental and real-life conditions

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) |
| Sweep speed | 5g (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |

Durability test

| | |
|--|---------------------|
| Specification | IEC 60512-5:1992-08 |
| Impulse withstand voltage at sea level | 9.8 kV |
| Contact resistance R_1 | 0.3 m Ω |
| Contact resistance R_2 | 0.4 m Ω |
| 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 |

Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
| 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 |
|-------------------|---------------------|

Packaging specifications

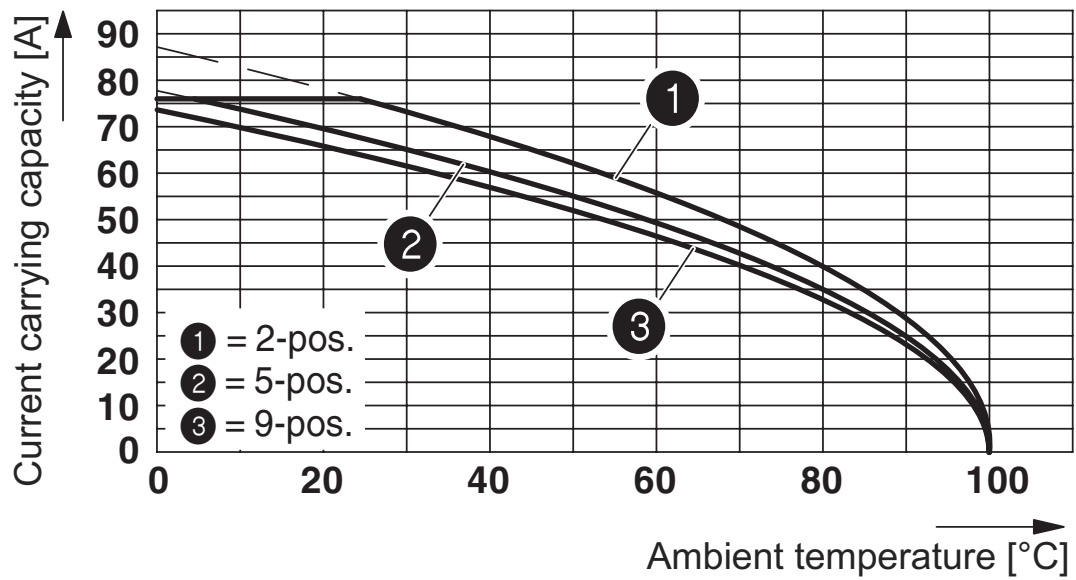
| | |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

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Drawings

Diagram



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

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Approvals



EAC

Approval ID: B.01687



cULus Recognized

Approval ID: E60425-20040202

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B | | | | |
| | 300 V | 55 A | - | - |
| Use group C | | | | |
| | 300 V | 55 A | - | - |
| Use group D | | | | |
| | 600 V | 5 A | - | - |



IECEE CB Scheme

Approval ID: DE1-66677

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | | 76 A | - | - |



VDE Zeichengenehmigung

Approval ID: 40055586

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | | 76 A | - | - |

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27440402 |
| ECLASS-10.0.1 | 27440402 |
| ECLASS-11.0 | 27460201 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

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Accessories

CP-PC RD - Coding profile

1701967

<https://www.phoenixcontact.com/de/produkte/1701967>

Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red



DFK-PC 16-SS - Accessories

1705449

<https://www.phoenixcontact.com/de/produkte/1705449>

Screw set for DFK-PC 16... connectors



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SZK PH1 VDE - Screwdriver

1205150

<https://www.phoenixcontact.com/de/produkte/1205150>



Screwdriver, PH crosshead, VDE insulated, size: PH 1 x 80 mm, 2-component grip, with non-slip grip

SZS 0,6X2,5 VDE - Screwdriver

1205040

<https://www.phoenixcontact.com/de/produkte/1205040>



Screwdriver, slot-headed, VDE insulated, size: 0.6 x 2.5 x 80 mm, 2-component grip, with non-slip grip

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DFK-PC MOUNT SET - Accessories

1054021

<https://www.phoenixcontact.com/de/produkte/1054021>

Contains 20 pcs. latch and screw elements for feed-through connectors each



IPC 16/ 3-STF-10,16 - PCB connector

1969467

<https://www.phoenixcontact.com/de/produkte/1969467>



PCB connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Male connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: IPC 16/..-STF, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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IPC 16/ 3-STF-SH-10,16 - PCB connector

1737323

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PCB connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Male connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: IPC 16/...-STF-SH, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

ISPC 16/ 3-STF-10,16 - PCB connector

1748639

<https://www.phoenixcontact.com/de/produkte/1748639>



PCB connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Male connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: ISPC 16/...-STF, pitch: 10.16 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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