

# DFK-PC 6-16/ 6-G-10,16 - Feed-through header



1701498

<https://www.phoenixcontact.com/us/products/1701498>

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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: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: DFK-PC 6-16/..-G, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: without, mounting method: without, 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

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1701498                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 10 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA05                           |
| Product key                          | AAEWEA                         |
| GTIN                                 | 4046356030564                  |
| Weight per piece (including packing) | 32.42 g                        |
| Weight per piece (excluding packing) | 29.015 g                       |
| Customs tariff number                | 85366990                       |
| Country of origin                    | PL                             |

## Technical data

### Product properties

|                           |                        |
|---------------------------|------------------------|
| Product type              | Feed-through header    |
| Product family            | DFK-PC 6-16/..-G       |
| Product line              | COMBICON Connectors XL |
| Type                      | Feed-through header    |
| Number of positions       | 6                      |
| Pitch                     | 10.16 mm               |
| Number of connections     | 6                      |
| Number of rows            | 1                      |
| Number of potentials      | 6                      |
| Mounting type             | without                |
| 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          | 0.5 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                     | Selective coating  |
| Metal surface contact area (top layer)      | Silver (4 - 8 μm Ag)   |
| Metal surface contact area (middle layer)   | Nickel (2 - 4 μm Ni)   |
| Metal surface soldering area (top layer)    | Silver (4 - 8 μm Ag)   |
| Metal surface soldering area (middle layer) | Nickel (2 - 4 μm Ni)   |

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## 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. |
|--------------------|--|

## Dimensions

|                       |            |
|-----------------------|------------|
| Dimensional drawing   |            |
| Pitch                 | 10.16 mm   |
| Width [w]             | 80.4 mm    |
| Height [h]            | 23.1 mm    |
| Length [l]            | 46.4 mm    |
| Installed height      | 19 mm      |
| Solder pin length [P] | 4.1 mm     |
| Pin dimensions        | 1.2 x 1 mm |

## PCB design

|               |                  |
|---------------|------------------|
| Pin spacing   | 10.16 mm         |
| Hole diameter | 1.7 mm<br>2.5 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         |

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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                        |

## Contact holder in insert

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

## Insertion and withdrawal forces

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 20          |
| Insertion strength per pos. approx. | 15 N        |
| Withdraw strength per pos. approx.  | 15 N        |

## Electrical tests

## Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 8                     |

## 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              |
| 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

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## 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           |

## Durability test

|  |                     |
|--|---------------------|
| Specification                          | IEC 60512-5:1992-08 |
| Impulse withstand voltage at sea level | 9.8 kV              |
| Contact resistance R <sub>1</sub>      | 0.5 mΩ              |
| Contact resistance R <sub>2</sub>      | 0.6 mΩ              |
| Insertion/withdrawal cycles            | 20                  |

## 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                                    |

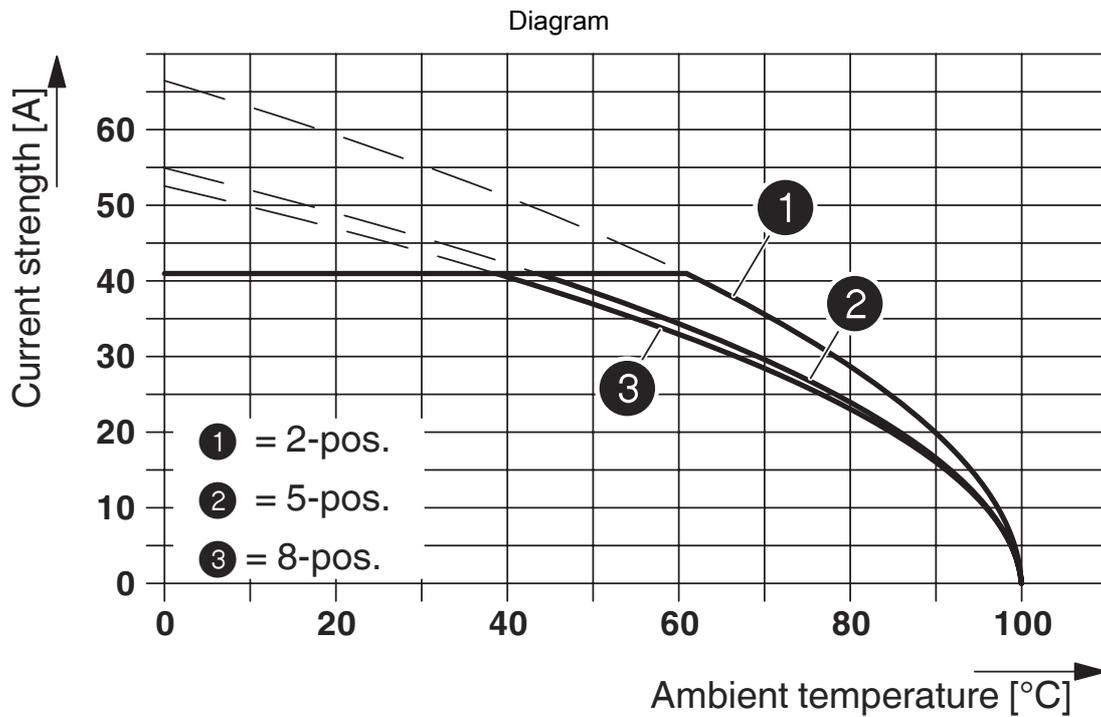
## Packaging specifications

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

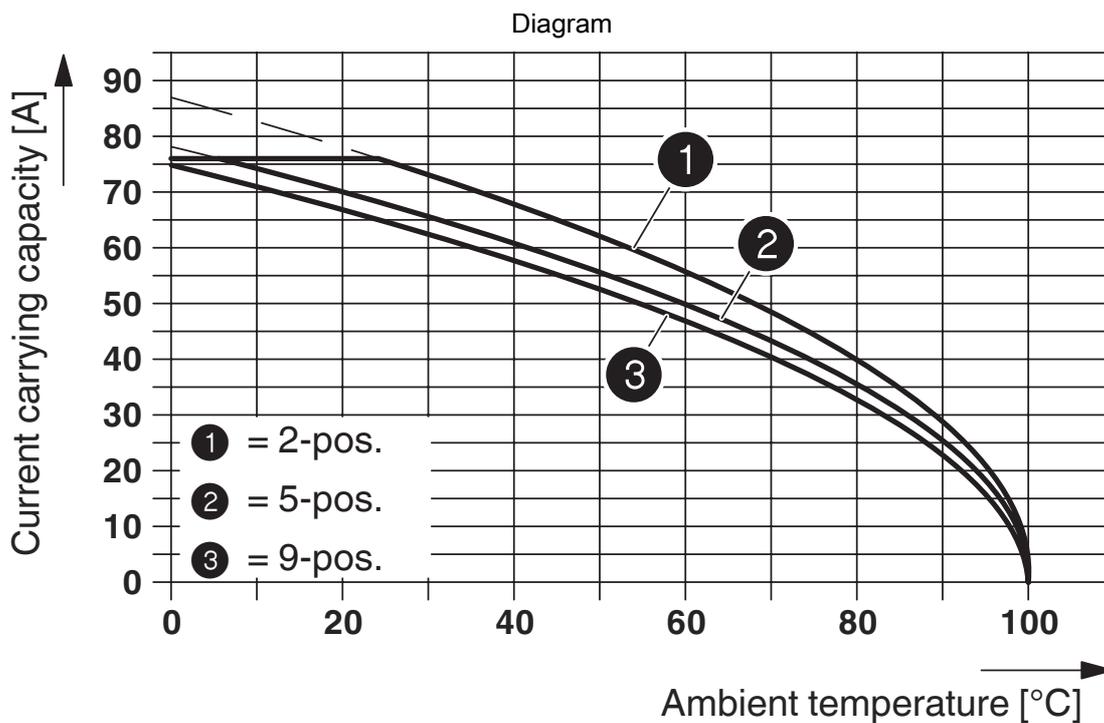
## Packaging specifications

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

Drawings



Type: PC 6/...-ST-10,16 with DFK-PC 6-16/...-G-10,16



Type: PC 16/...-ST-10,16 with DFK-PC 6-16/...-G-10,16

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1701498>

|  <b>cULus Recognized</b><br>Approval ID: E60425-20040202 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B   | 300 V                 | 66 A                  | -                 | -                           |
| C   | 300 V                 | 66 A                  | -                 | -                           |
| D   | 600 V                 | 5 A                   | -                 | -                           |

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002637 |
|----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### 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% |
|-------------------------------------|----------------------------|

### EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.199 kg CO2e |
|---------|---------------|

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