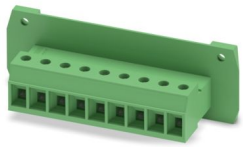
# DFK-PC 4/ 9-GF-7,62 - Feed-through plug

1840625

https://www.phoenixcontact.com/us/products/1840625

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Feed-through connector, nominal cross section: 4 mm$^2$, color: green, nominal current: 20 A, rated voltage (III/2): 630 V, contact surface: Sn, contact connection type: Pin, number of potentials: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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 | 1840625 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | AA04 |
| Product key | AADWCA |
| GTIN | 4017918111779 |
| Weight per piece (including packing) | 37.19 g |
| Weight per piece (excluding packing) | 35.8 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

# 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 | 9 |
| Pitch | 7.62 mm |
| Number of connections | 9 |
| Number of rows | 1 |
| Number of potentials | 9 |
| 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 mΩ |
| 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 mm² |
| 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 mm² ... 4 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 4 mm² |

| | |
|---|---|
| Conductor cross-section AWG | 24 ... 10 |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 4 mm² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 4 mm² |
| 2 conductors with same cross section, solid | 0.2 mm² ... 2.5 mm² |
| 2 conductors with same cross section, flexible | 0.2 mm² ... 2.5 mm² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.2 mm² ... 1.5 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 2.5 mm² |
| 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 |

## 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 - 7 µm Sn) |
| Metal surface contact area (top layer) | Tin (5 - 7 µm Sn) |

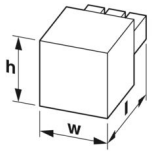
Material data - housing

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

## Dimensions

| | |
|---|---|
| Dimensional drawing |   |
| Pitch | 7.62 mm |
| Width [w] | 90.2 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 mm² / solid / > 10 N |
| | 0.2 mm² / flexible / > 10 N |
| | 4 mm² / solid / > 60 N |
| | 4 mm² / 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 |

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 |

| | |
|---|---|
| Result | Test passed |

## 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 | $10^{12}$ Ω |

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

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 | 7.3 kV |
| Contact resistance $R_1$ | 0.4 mΩ |
| Contact resistance $R_2$ | 0.6 mΩ |
| 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 |

Ambient conditions

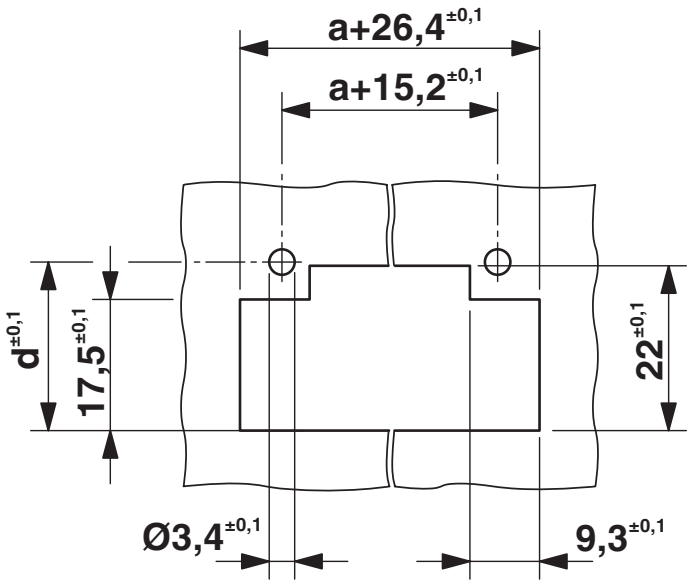
| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

## Packaging specifications

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

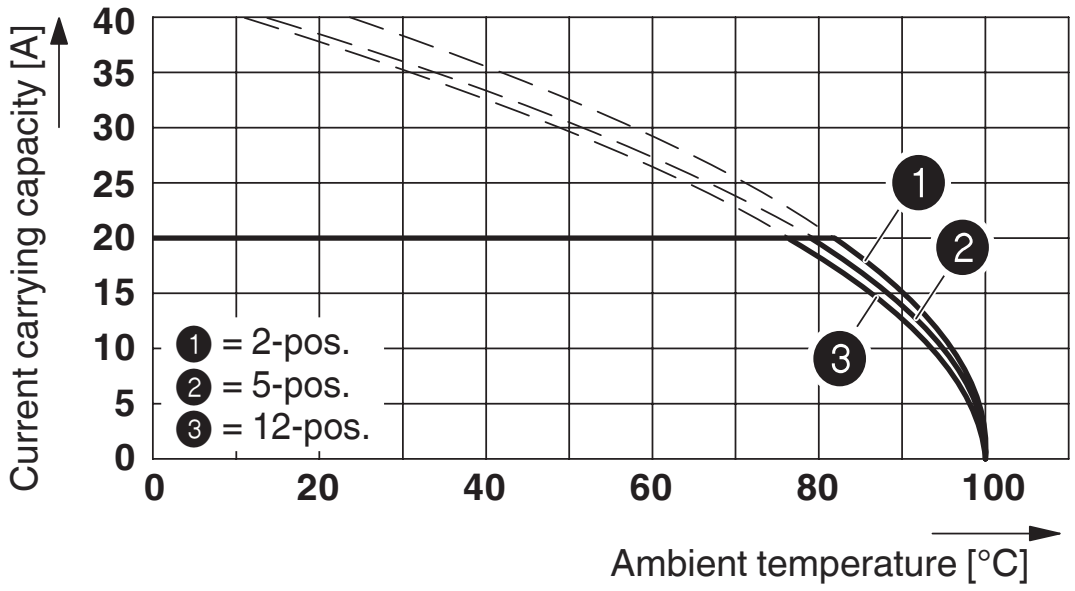
## Drawings

Dimensional drawing




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

Diagram




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

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1840625

**CSA**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 20 A | 28 - 10 | - |
| C | | | | |
| | 300 V | 20 A | 28 - 10 | - |

**cULus Recognized**
Approval ID: E60425-19920722

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 35 A | 30 - 10 | - |
| C | | | | |
| | 300 V | 35 A | 30 - 10 | - |
| D | | | | |
| | 600 V | 5 A | 30 - 10 | - |

**DNV GL**
Approval ID: TAE00001EZ

**LR**
Approval ID: LR21308805TA

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27460202 |
| ECLASS-15.0 | 27460202 |

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC002638 |

### UNSPSC

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

## 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 | 97e63531-afc4-4a24-a30f-8bb018afbc5a |

EF3.0 Climate Change

| | |
|---|---|
| CO2e kg | 0.259 kg CO2e |


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