

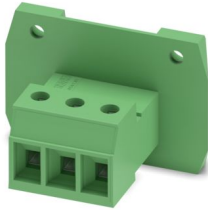
# DFK-PC 4/ 3-GF-7,62 - Feed-through plug



1840560

<https://www.phoenixcontact.com/us/products/1840560>

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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: 3, number of rows: 1, number of positions: 3, number of connections: 3, 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                          | 1840560       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | AA04          |
| Product key                          | AADWCA        |
| GTIN                                 | 4017918111717 |
| Weight per piece (including packing) | 14.694 g      |
| Weight per piece (excluding packing) | 13.694 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       | 3                      |
| Pitch                     | 7.62 mm                |
| Number of connections     | 3                      |
| Number of rows            | 1                      |
| Number of potentials      | 3                      |
| 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 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, solid                                               | 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 |
|---------------|-----------------|

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

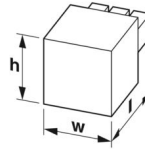
## Dimensions

# DFK-PC 4/ 3-GF-7,62 - Feed-through plug

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## Dimensional drawing



|                  |          |
|------------------|----------|
| Pitch            | 7.62 mm  |
| Width [w]        | 44.48 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 |
|---------------|---------------------|

### 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 |
|--------|-------------|
|--------|-------------|

## 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

### 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 m $\Omega$      |
| Contact resistance $R_2$               | 0.6 m $\Omega$      |
| Insertion/withdrawal cycles            | 25                  |

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## 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

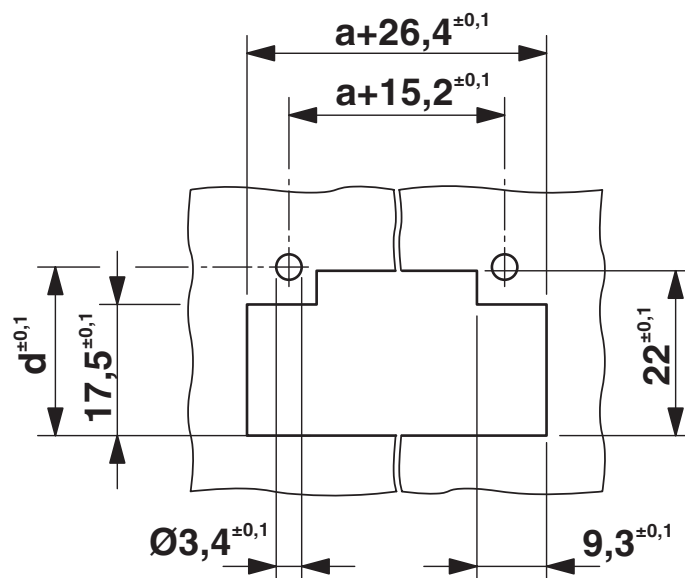
|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient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

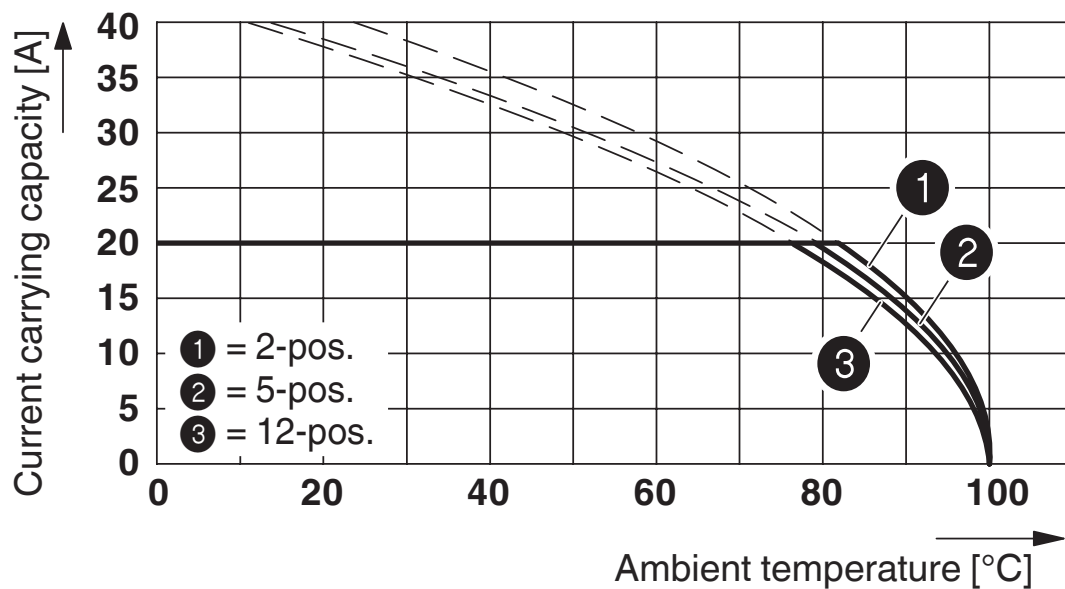
W=2: d=21.9

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

# DFK-PC 4/ 3-GF-7,62 - Feed-through plug



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1840560>

|  <b>CSA</b><br>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><br>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><br>Approval ID: TAE00001EZ |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|                                                                                                                            |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>LR</b><br>Approval ID: LR21308805TA |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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## Classifications

### ECLASS

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

### ETIM

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

### 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                                 | 0.144 kg CO2e                            |

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