

# VDFK 4/K - Panel feed-through terminal block

0709233

<https://www.phoenixcontact.com/us/products/0709233>

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Panel feed-through terminal block, connection method: Screw connection with tension sleeve, Solder connection, number of positions: 1, load current: 32 A, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, connection direction of the conductor to plug-in direction: 0 °, width: 10 mm, color: gray

## Your advantages

- Easy fixing using plastic knurled nut or quick mounting wedge
- Touch-proof insulating housing
- Terminal blocks can be grouped
- Spacer plates increase clearances and creepage distances
- Strain relief can be snapped on as an option
- Universal screw connection with screw locking

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 0709233       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | AA28          |
| Product key                          | AA1ACB        |
| GTIN                                 | 4017918117023 |
| Weight per piece (including packing) | 4.9 g         |
| Weight per piece (excluding packing) | 4.545 g       |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                       |                                   |
|-----------------------|-----------------------------------|
| Product type          | Panel feed-through terminal block |
| Product family        | VDFK 4                            |
| Number of positions   | 1                                 |
| Pitch                 | 10 mm                             |
| Number of connections | 2                                 |
| Number of rows        | 1                                 |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

### Electrical properties

#### Properties

|                             |       |
|-----------------------------|-------|
| Nominal current $I_N$       | 32 A  |
| Nominal voltage $U_N$       | 500 V |
| Rated voltage (III/3)       | 500 V |
| Rated surge voltage (III/3) | 6 kV  |

### Connection data

#### Connection technology

|                       |                   |
|-----------------------|-------------------|
| Connector system      | VDFK 4            |
| Nominal cross section | 4 mm <sup>2</sup> |

#### Conductor connection exterior

|   |  |
|---|--|
| 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> ... 6 mm <sup>2</sup>    |
| Conductor cross-section flexible  | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>    |
| 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, rigid   | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible  | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.25 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>  |
| Internal cylindrical gage   | A4   |
| Stripping length  | 8 mm   |
| Tightening torque   | 0.6 Nm ... 0.8 Nm                            |

#### Conductor connection interior

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|  |                   |
|--|-------------------|
| Connection method  | Solder connection |
| Connection direction of the conductor to plug-in direction | 0 °               |

## Mounting

|                 |             |
|-----------------|-------------|
| Panel thickness | 1 mm...4 mm |
|-----------------|-------------|

## 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 | tin-plated   |

### Material data - housing

|   |             |
|---|-------------|
| Color (Housing)   | gray (7042) |
| 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

### Safety note

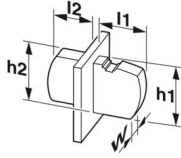
|             |  |
|-------------|--|
| Safety note | <ul style="list-style-type: none"><li>• <b>WARNING:</b> Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li><li>• The installation notes/Design In documents online on the download page at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> must be observed for this product.</li><li>• The cable entry funnel is not safe to touch. Never connect or disconnect the terminal when it is energized. Take appropriate steps to ensure touch protection.</li><li>• To maintain the nominal voltage, cast the terminals on the inside.</li><li>• There is no electrical contact to the housing. Make sure that protective grounding is provided for green/yellow color variants and articles marked with PE.</li></ul> |
|-------------|--|

## Dimensions

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|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Pitch               | 10 mm  |
| Width [w]           | 10 mm  |
| Height [h]          | 20.5 mm  |
| Length [l]          | 25.5 mm  |

## External dimensions

|             |         |
|-------------|---------|
| Height [h1] | 20.5 mm |
| Length [l1] | 10.9 mm |

## Internal dimensions

|             |         |
|-------------|---------|
| Height [h2] | 9.8 mm  |
| Length [l2] | 13.6 mm |

## Mechanical tests

### Test for conductor damage and slackening

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60947-7-1:2009-04 |
| Result        | Test passed           |

### Pull-out test

|   |   |
|---|---|
| Specification   | IEC 60947-7-1:2009-04                   |
| 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 |
|   | 6 mm <sup>2</sup> / solid / > 80 N      |
|   | 4 mm <sup>2</sup> / flexible / > 60 N   |

## Electrical tests

### Temperature-rise test

|                                   |                                |
|-----------------------------------|--------------------------------|
| Specification                     | IEC 60947-7-1:2009-04          |
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

### Short-time withstand current

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60947-7-1:2009-04 |
|---------------|-----------------------|

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

|  |                       |
|--|-----------------------|
| Application                            | Internal part molded  |
| Specification                          | IEC 60947-7-1:2009-04 |
| Insulating material group              | I                     |
| Comparative tracking index (IEC 60112) | CTI 600               |
| Rated insulation voltage (III/3)       | 500 V                 |
| Rated surge voltage (III/3)            | 6 kV                  |

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|  |        |
|--|--------|
| minimum clearance value - non-homogenous field (III/3) | 5.5 mm |
| minimum creepage distance (III/3)                      | 6.3 mm |

## Environmental and real-life conditions

### Vibration test

|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:2007-12       |
| 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           |

### Glow-wire test

|                  |                        |
|------------------|------------------------|
| Specification    | IEC 60695-2-11:2014-02 |
| Temperature      | 960 °C                 |
| Time of exposure | 30 s                   |

### 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 ... 105 °C (Depending on the current carrying capacity/derating curve) |

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|   |   |
|---|---|
| Ambient temperature (operation)         | -40 °C ... 105 °C (Depending on the current carrying capacity/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

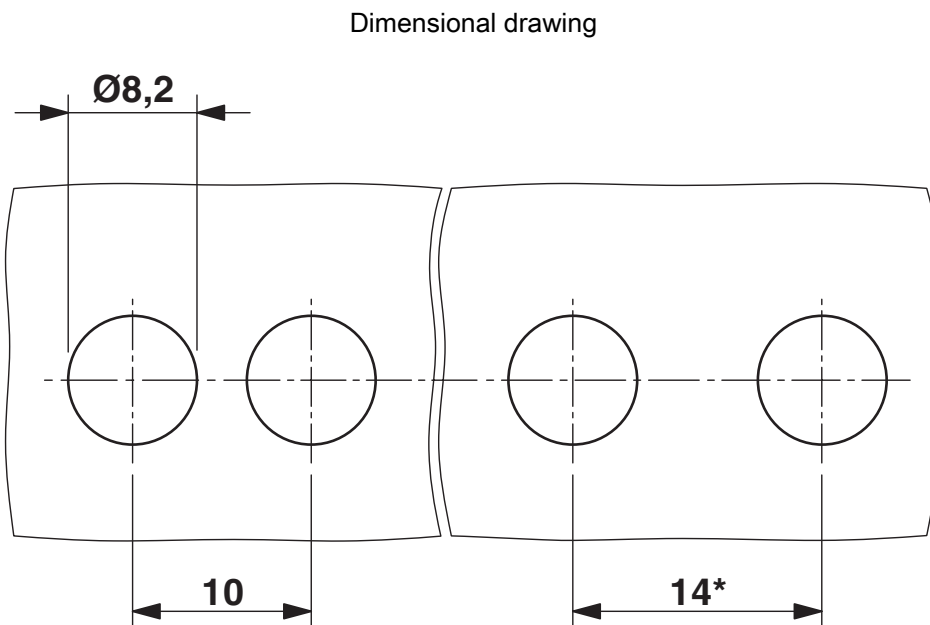
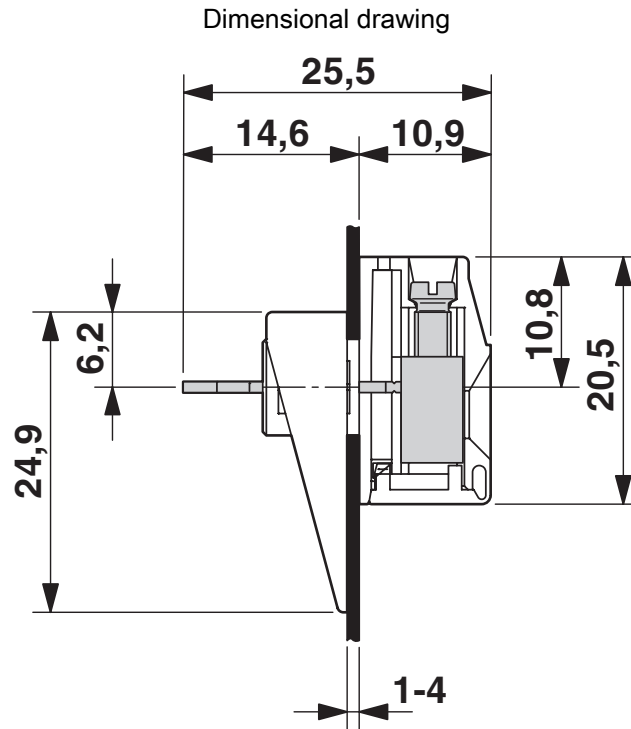
|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

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## Drawings



\* Dimensions when using the DP-VDFK 4/4 spacer plate

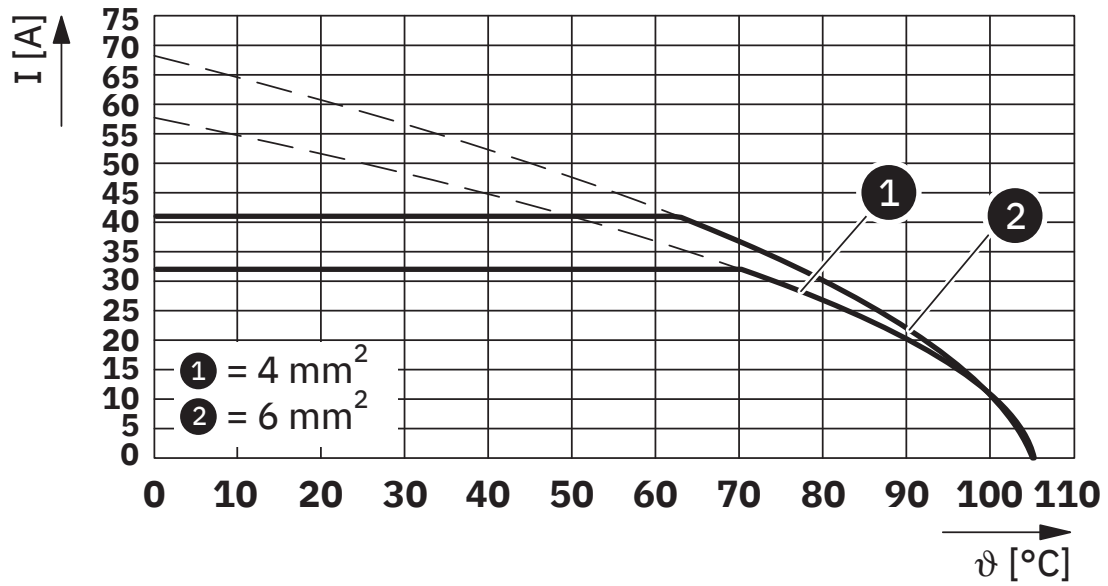
# VDFK 4/K - Panel feed-through terminal block



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Diagram



Type: VDFK 4

# VDFK 4/K - Panel feed-through terminal block





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## Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/0709233>

|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| B  | 300 V                 | 30 A                  | 28 - 10           | -                    |
| C  | 150 V                 | 30 A                  | 28 - 10           | -                    |
| D  | 300 V                 | 10 A                  | 28 - 10           | -                    |

|  <b>cULus Recognized</b><br>Approval ID: E60425-19770427 |                       |                       |                   |                      |
|---|-----------------------|-----------------------|-------------------|----------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| B   | 300 V                 | 30 A                  | 30 - 10           | -                    |
| C   | 150 V                 | 30 A                  | 30 - 10           | -                    |
| D   | 300 V                 | 10 A                  | 30 - 10           | -                    |

|  <b>ATEX</b><br>Approval ID: ExTR17.0071 |                       |                       |                   |                      |
|---|-----------------------|-----------------------|-------------------|----------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine   | 275 V                 | 32 A                  | -                 | 0.2 - 4              |

|  <b>CCC</b><br>Approval ID: 2020322313003276 |  |  |  |  |
|---|--|--|--|--|
|---|--|--|--|--|

|  <b>IECEx</b><br>Approval ID: IECExDEK17.0.60U |                       |                       |                   |                      |
|---|-----------------------|-----------------------|-------------------|----------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine   | 275 V                 | 32 A                  | -                 | 0.2 - 4              |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27141134 |
| ECLASS-15.0 | 27141134 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001283 |
|-----------|----------|

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

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.019 kg CO2e |
|---------|---------------|

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