

0709796  
<https://www.phoenixcontact.com/us/products/0709796>

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Panel feed-through terminal block, connection method: Screw connection with tension sleeve, Cable lug connection, number of positions: 1, load current: 76 A, cross section: 0.5 mm<sup>2</sup> - 25 mm<sup>2</sup>, connection direction of the conductor to plug-in direction: 0 °, width: 12.1 mm

### Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Tool-free snap-in principle enables easy mounting on the device panel
- Automatic panel thickness compensation enables universal use
- Reliable seal even with low-viscosity molding compounds

### Commercial data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 0709796            |
| Packing unit                         | 50 pc              |
| Minimum order quantity               | 50 pc              |
| Sales key                            | AA28               |
| Product key                          | AA1DAB             |
| Catalog page                         | Page 635 (CC-2009) |
| GTIN                                 | 4017918153465      |
| Weight per piece (including packing) | 27.3 g             |
| Weight per piece (excluding packing) | 26.53 g            |
| Customs tariff number                | 85369010           |
| Country of origin                    | GR                 |

# HDFK 16-VP - Panel feed-through terminal block



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## Technical data

### Product properties

|                       |                                   |
|-----------------------|-----------------------------------|
| Product type          | Panel feed-through terminal block |
| Product family        | HDFK 16-VP                        |
| Number of positions   | 1                                 |
| Pitch                 | 12.1 mm                           |
| Number of connections | 2                                 |
| Number of rows        | 1                                 |
| Number of potentials  | 1                                 |

### Insulation characteristics

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

### Electrical properties

|                             |       |
|-----------------------------|-------|
| Nominal current $I_N$       | 76 A  |
| Nominal voltage $U_N$       | 500 V |
| Degree of pollution         | 3     |
| Rated voltage (III/3)       | 500 V |
| Rated surge voltage (III/3) | 6 kV  |

### Connection data

#### Connection technology

|                       |                    |
|-----------------------|--------------------|
| Connector system      | HDFK 16            |
| Nominal cross section | 16 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   | 0.5 mm <sup>2</sup> ... 25 mm <sup>2</sup> |
| Conductor cross section flexible  | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| 2 conductors with same cross section, solid   | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible  | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Internal cylindrical gage   | B7   |
| Stripping length  | 16 mm                                      |
| Tightening torque   | 2 Nm ... 2.3 Nm                            |

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## Conductor connection interior

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

## 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>• Only electrically qualified personnel may install and operate the product.<br/>To recognize and prevent danger, the qualified personnel must be familiar with the basics of electrical engineering.</li></ul> |
|             | <ul style="list-style-type: none"><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></ul>      |
|             | <ul style="list-style-type: none"><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></ul>                                      |
|             | <ul style="list-style-type: none"><li>• To maintain the nominal voltage, align the cable lugs straight and centered, and cast the terminals on the inside.</li></ul>  |
|             | <ul style="list-style-type: none"><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>   |

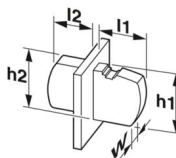
## Dimensions

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|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Pitch               | 12.1 mm  |
| Width [w]           | 12.1 mm  |
| Height [h]          | 40 mm  |
| Length [l]          | 58 mm  |

## External dimensions

|             |         |
|-------------|---------|
| Width [w]   | 12.1 mm |
| Height [h1] | 40 mm   |
| Length [l1] | 32.3 mm |

## Internal dimensions

|             |         |
|-------------|---------|
| Height [h2] | 26 mm   |
| Length [l2] | 24.3 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 | 0.5 mm <sup>2</sup> / solid / > 20 N    |
|   | 0.5 mm <sup>2</sup> / flexible / > 20 N |
|   | 25 mm <sup>2</sup> / stranded / > 135 N |
|   | 16 mm <sup>2</sup> / flexible / > 100 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

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

### Glow-wire test

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

### Ambient conditions

|   |   |
|---|---|
| Ambient temperature (operation)         | -40 °C ... 100 °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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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141134 |
| ECLASS-13.0 | 27141134 |
| ECLASS-12.0 | 27141134 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001283 |
|----------|----------|

### 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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