

# HDFKV 50-VP-DP - Panel feed-through terminal block



0708593

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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: 150 A, cross section: 16 mm<sup>2</sup> - 50 mm<sup>2</sup>, connection direction of the conductor to plug-in direction: -90 °, width: 18.8 mm

The figure shows a similar product

## 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	0708593
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AA28
Product key	AA1FAE
GTIN	4017918004705
Weight per piece (including packing)	99.54 g
Weight per piece (excluding packing)	99.54 g
Customs tariff number	85369010
Country of origin	GR

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## Technical data

### Product properties

Product type	Panel feed-through terminal block
Product family	HDFKV 50-VP
Number of positions	1
Pitch	18.8 mm
Number of connections	2
Number of rows	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

#### Properties

Nominal current $I_N$	150 A
Nominal voltage $U_N$	690 V
Rated voltage (III/3)	690 V
Rated surge voltage (III/3)	8 kV

### Connection data

#### Connection technology

Connector system	HDFK 50
Nominal cross section	50 mm <sup>2</sup>

#### Conductor connection exterior

Connection method	Screw connection with tension sleeve
Connection direction of the conductor to plug-in direction	-90 °
Conductor cross-section rigid	16 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross-section flexible	16 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, without plastic sleeve	10 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, with plastic sleeve	10 mm <sup>2</sup> ... 50 mm <sup>2</sup>
2 conductors with same cross section, rigid	6 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with same cross section, flexible	10 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	6 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	6 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Internal cylindrical gage	B10
Stripping length	24 mm
Tightening torque	6 Nm ... 8 Nm

#### Conductor connection interior

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

## Mounting

Panel thickness	1 mm...6 mm
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## 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

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. To recognize and prevent danger, the qualified personnel must be familiar with the basics of electrical engineering.</li><li>• Observe the technical data provided here and refer to the documents listed under "Downloads". The download area contains important information, such as installation notes, technical drawings, and 3D data.</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, align the cable lugs straight and centered, and 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>
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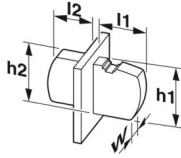
## Dimensions

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Dimensional drawing	
Pitch	18.8 mm
Width [w]	18.8 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	16 mm <sup>2</sup> / stranded / > 100 N
	16 mm <sup>2</sup> / flexible / > 100 N
	50 mm <sup>2</sup> / stranded / > 236 N
	50 mm <sup>2</sup> / flexible / > 236 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
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### Air clearances and creepage distances | 1. Insulation coordination

Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	690 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	8 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)

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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 ... 100 °C (Depending on the current carrying capacity/derating curve)

## 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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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/0708593>

 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	600 V	125 A	6 - 1/0	-
C	600 V	125 A	6 - 1/0	-

 <b>UL Recognized</b> Approval ID: E60425-19890329				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	600 V	170 A	6 - 2/0	-
C	600 V	170 A	6 - 2/0	-

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## Classifications

### ECLASS

ECLASS-13.0	27141134
ECLASS-15.0	27141134

### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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%
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