

# HDFK 50 - Panel feed-through terminal block



0708739

<https://www.phoenixcontact.com/in/products/0708739>

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Panel feed-through terminal block, connection method: Screw connection with tension sleeve, Screw connection with tension sleeve, 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: 0 °, width: 18.8 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

## Commercial Data

Item number	0708739
Packing unit	10 pc
Minimum order quantity	10 pc
Sales Key	AA1
Product Key	AA1FAA
Catalog Page	Page 617 (C-1-2013)
GTIN	4017918004750
Weight per Piece (including packing)	126.38 g
Weight per Piece (excluding packing)	126.38 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	HDFK 50
Number of positions	1
Pitch	18.8 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 $I_N$	150 A
Nominal voltage $U_N$	690 V
Degree of pollution	3
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	0 °
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, solid	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

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## Conductor connection interior

Connection method	Screw connection with tension sleeve
Connection direction of the conductor to plug-in direction	0 °
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, solid	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

## Mounting

Plate 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

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

### Material data – actuating element

Color ()	()
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## Notes

### Safety note

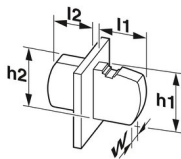
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0708739

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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> </ul>
	<ul style="list-style-type: none"> <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> </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><input type="checkbox"/> 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

Dimensional drawing	
Pitch	18.8 mm
Width [w]	18.8 mm
External dimensions	
Width [w]	18.8 mm
Height [h1]	54 mm
Length [l1]	43 mm
Internal dimensions	
Width [w]	18.8 mm
Height [h2]	55 mm
Length [l2]	35 mm

## Mechanical tests

### Mechanical strength

Result	Test passed
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### Attachment on the carrier

DIN rail/fixing support	Metal wall 4 mm
Test force setpoint	10 N
Result	Test passed

## Electrical tests

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

Application	Metal wall 1.0 mm ... 6.0 mm
Specification	IEC 60947-7-1:2002-07

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0708739

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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

## Air clearances and creepage distances | 2. Insulation coordination

Application	Plastic panel 1.0 ... 6.0 mm
Specification	IEC 60947-7-1:2002-07
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	630 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

## Air clearances and creepage distances | 3. Insulation coordination

Application	Plastic panel 1.0 ... 6.0 mm with DP-HDFK spacer plate
Specification	IEC 60947-7-1:2002-07
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm

## Surge voltage test

Result	Test passed
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## Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Result	Test passed
Result	Test passed

## Power-frequency withstand voltage

Result	Test passed
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## Environmental and real-life conditions

### Needle-flame test

Time of exposure	30 s
Result	Test passed

## Packaging specifications

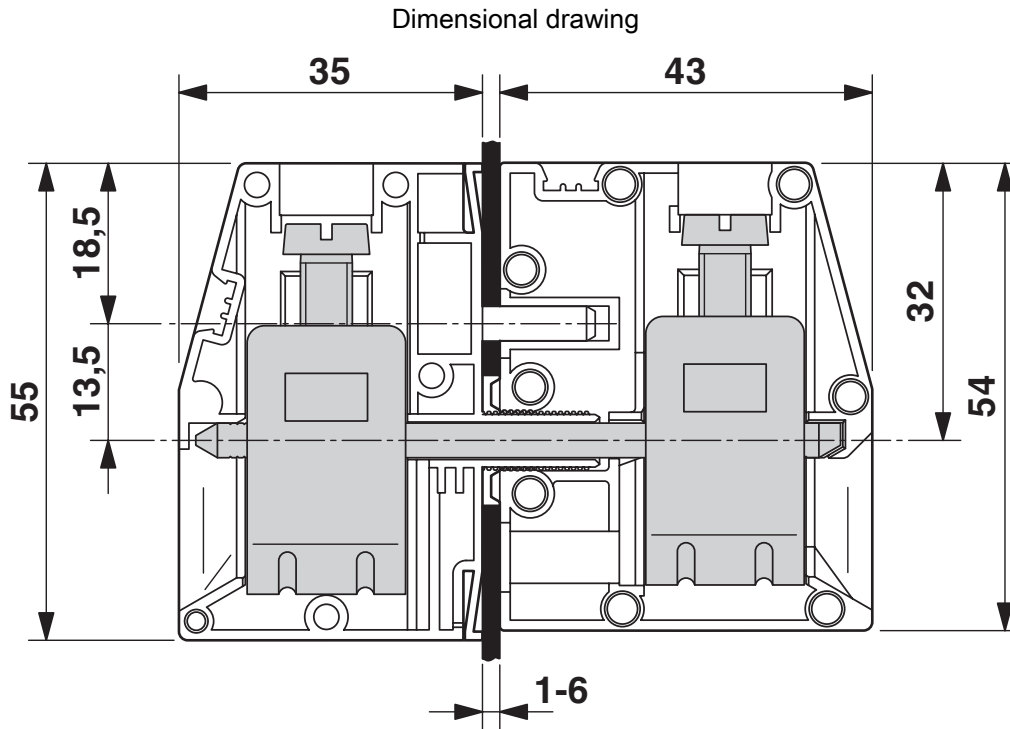
Type of packaging	packed in cardboard
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## Drawings




# HDFK 50 - Panel feed-through terminal block





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## Approvals

 <b>CSA</b> Approval ID: 13631				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	600 V	125 A	6 - 1/0	-
	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 $\text{mm}^2$
	600 V	170 A	6 - 2/0	-
	600 V	170 A	6 - 2/0	-

 <b>IECEE CB Scheme</b> Approval ID: NL-29947				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	690 V	150 A	-	- 50

 <b>EAC</b> Approval ID: B.01687				
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 <b>KEMA-KEUR</b> Approval ID: 2169260.01				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	690 V	150 A	-	- 50

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001283
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### 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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## Accessories

### SZS 1,2X8,0 VDE - Screwdriver

1205082

<https://www.phoenixcontact.com/in/products/1205082>



Screwdriver, slot-headed, VDE insulated, size: 1.2 x 8.0 x 175 mm, 2-component grip, with non-slip grip

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### UKH 50 EP - Insertion profile

3009228

<https://www.phoenixcontact.com/in/products/3009228>



Insertion profile, color: silver

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## UC-TM 16 - Marker for terminal blocks

0819217

<https://www.phoenixcontact.com/in/products/0819217>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 16 mm, lettering field size: 15.45 x 10.5 mm, Number of individual labels: 32

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## UC-TM 16 CUS - Marker for terminal blocks

0824621

<https://www.phoenixcontact.com/in/products/0824621>



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 16 mm, lettering field size: 15.45 x 10.5 mm, Number of individual labels: 32

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## ZB 16:UNPRINTED - Zack marker strip

0827461

<https://www.phoenixcontact.com/in/products/0827461>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 16 mm, lettering field size: 16 x 10.5 mm, Number of individual labels: 50

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## ZBF 16 CUS - Zack Marker strip, flat

0827465

<https://www.phoenixcontact.com/in/products/0827465>



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 16 mm, lettering field size: 5.15 x 16 mm, Number of individual labels: 5

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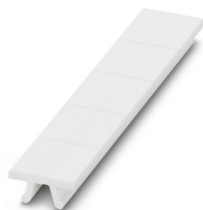
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## ZB 12:UNPRINTED - Zack marker strip

0812120

<https://www.phoenixcontact.com/in/products/0812120>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 12.2 mm, lettering field size: 12 x 10.5 mm, Number of individual labels: 5

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