

# PCB terminal block - ZFKDS 10-10,00



1986628

<https://www.phoenixcontact.com/de/produkte/1986628>

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PCB terminal block, nominal current: 76 A, rated voltage (III/2): 400 V, nominal cross section: 10 mm<sup>2</sup>, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: ZFKDS(A) 10, pitch: 10 mm, connection method: Spring-cage connection, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 6.5 mm, number of solder pins per potential: 4, type of packaging: packed in cardboard. The article can be aligned to create different nos. of positions!

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## Your advantages

- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Separate bridge shaft for easily connecting multiple positions to jumpers
- Quick and convenient testing using integrated test option

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## Commercial Data

Item number	1986628
Packing unit	50 pc
Minimum order quantity	50 pc
Sales Key	E1 - Leiterplattenanschl.
Product Key	AANMBA
Catalog Page	Page 479 (C-1-2013)
GTIN	4017918973087
Weight per Piece (including packing)	10,739 g
Weight per Piece (excluding packing)	9,7 g
Customs tariff number	85369010
Country of origin	PL

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## Technical Data

### Product properties

Type	PC terminal block can be aligned
Product line	COMBICON Terminals L
Product type	Printed circuit board terminal
Number of positions	1
Pitch	10 mm
Number of connections	1
Number of rows	1
Number of potentials	1
Pin layout	Linear pinning

### Electrical properties

Nominal current $I_N$	76 A
Nominal voltage $U_N$	400 V
Pollution degree	3
Rated voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV

### Connection data

#### Connection technology

Type	PC terminal block can be aligned
Nominal cross section	10 mm <sup>2</sup>

#### Conductor connection

Connection method	Spring-cage connection
Conductor cross section solid	0.2 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section AWG	24 ... 6
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Stripping length	12 mm

### Mounting

Mounting type Wave soldering	Wave soldering
Mounting type	Wave soldering

### Material specifications

#### Material data - contact

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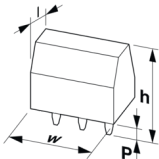
<https://www.phoenixcontact.com/de/produkte/1986628>

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 (10 - 16 µm Sn)
Metal surface soldering area (top layer)	Tin (10 - 16 µm Sn)

## Material data - housing

Housing color	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

## Dimensions

Dimensional drawing	
Pitch	10 mm
Width [w]	15 mm
Height [h]	33.5 mm
Length [l]	33.4 mm
Installed height	27 mm
Solder pin length [P]	6.5 mm

## PCB design

Pin spacing	10 mm
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## Mechanical tests

### Connection test

Specification	IEC 60998-2-2:1991-10
Result	Test passed

### Test for conductor damage and slackening

Specification	IEC 60998-2-2:1991-10
Result	Test passed

### Pull-out test

Specification	IEC 60998-2-2:1991-10
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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
	16 mm <sup>2</sup> / solid / > 100 N
	10 mm <sup>2</sup> / flexible / > 90 N

## Electrical tests

### Temperature-rise test

Specification	IEC 60998-2-1:1990-04
Requirement temperature-rise test	Increase in temperature ≤ 45 K

### Insulation resistance

Specification	IEC 60998-2-2:1991-10
Insulation resistance, neighboring positions	10 <sup>9</sup> Ω

### 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)	320 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	4 mm
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm
Rated insulation voltage (II/2)	800 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	4 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 - 60.1 Hz)
Sweep speed	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

### Glow-wire test

Specification	IEC 60998-2-2:1991-10
Temperature	850 °C
Time of exposure	5 s

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## 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 ... 55 °C

## Packaging specifications

Type of packaging	packed in cardboard
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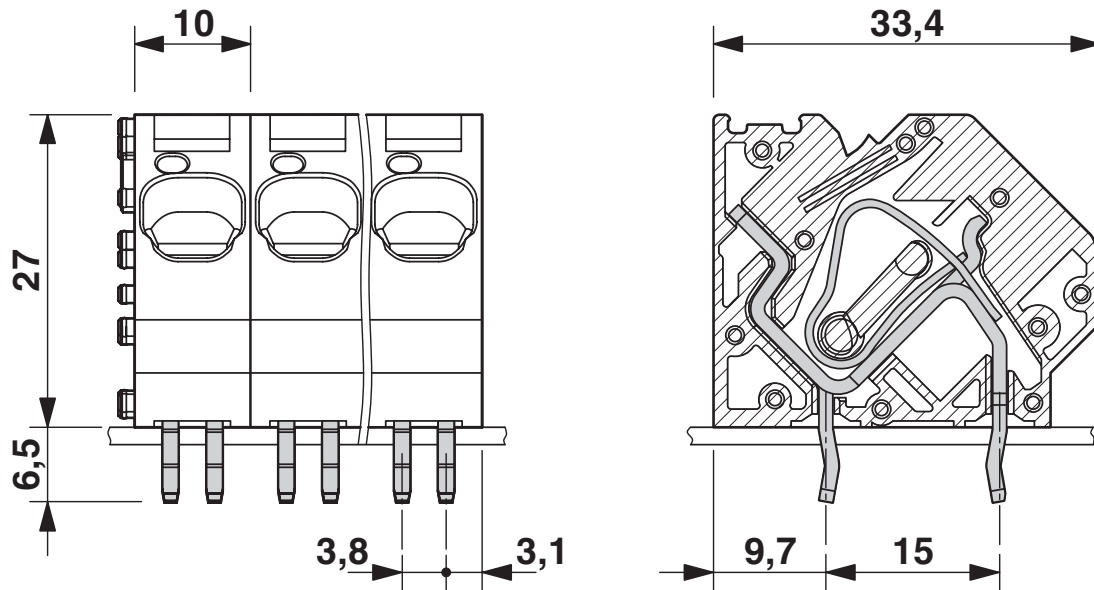


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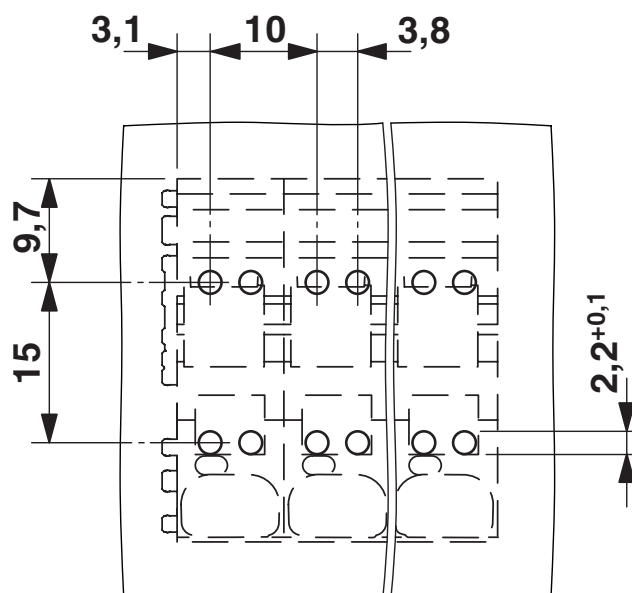
<https://www.phoenixcontact.com/de/produkte/1986628>

## Drawings

Dimensional drawing



Drilling plan/solder pad geometry

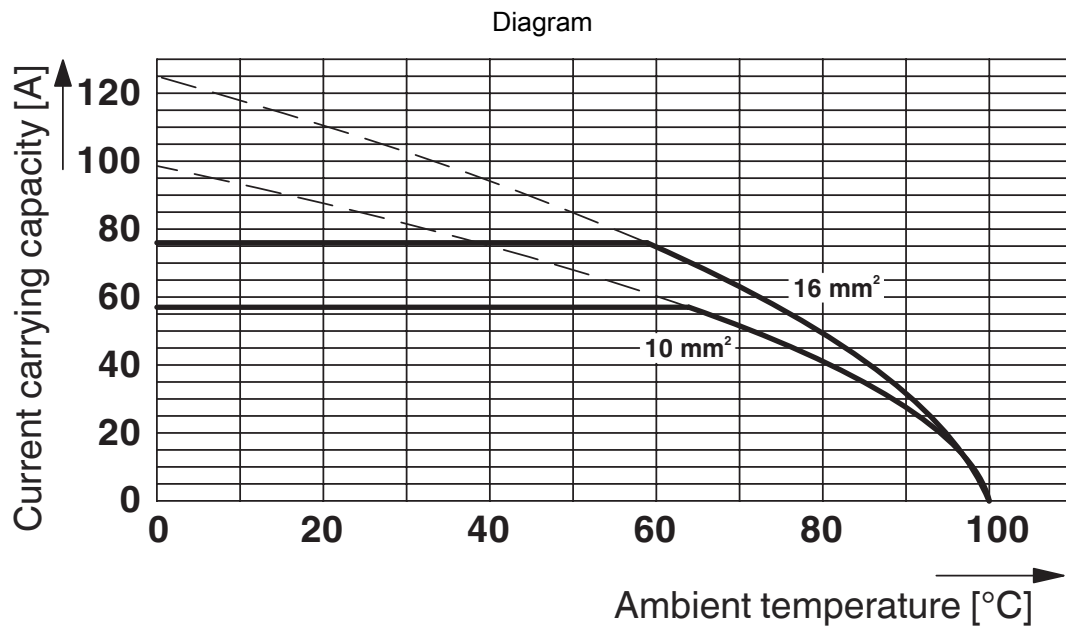


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Type: ZFKDS 10-10,00



# PCB terminal block - ZFKDS 10-10,00



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## Approvals



**EAC**

Approval ID: B.01687



**cULus Recognized**

Approval ID: E60425-19941110

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B	300 V	65 A	24 - 6	-
Use group C	150 V	65 A	24 - 6	-
Use group D	300 V	10 A	24 - 6	-



**IECEE CB Scheme**

Approval ID: DE-51235

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	320 V	76 A	-	0.2 - 16



**VDE Gutachten mit Fertigungsüberwachung**

Approval ID: 40036082

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	320 V	76 A	-	0.2 - 16

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## Classifications

### ECLASS

ECLASS-9.0	27440401
ECLASS-10.0.1	27440401
ECLASS-11.0	27460101

### ETIM

ETIM 8.0	EC002643
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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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## Mandatory Accessories

### PCB terminal block

PCB terminal block - ZFKDSA 10-11,7 - 1987054

<https://www.phoenixcontact.com/de/produkte/1987054>



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## Accessories

### Screwdriver

Screwdriver - SZF 3-1,0X5,5 - 1206612

<https://www.phoenixcontact.com/de/produkte/1206612>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 1.0 x 5.5 x 150 mm, 2-component grip, with non-slip grip

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