

# ZFKDS 10-15,00 - PCB terminal block

1986631

<https://www.phoenixcontact.com/us/products/1986631>



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Printed circuit board terminal, nominal current: 76 A, rated voltage (III/2): 1000 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: 15 mm, connection method: Spring-cage connection, mounting: Wave soldering, 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!

## 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

## Commercial data

Item number	1986631
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA14
Product key	AANMBB
GTIN	4017918973094
Weight per piece (including packing)	12.55 g
Weight per piece (excluding packing)	12.3 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	ZFKDS(A) 10
Product line	COMBICON Terminals L
Type	PC terminal block can be aligned
Number of positions	1
Pitch	15 mm
Number of connections	1
Number of rows	1
Number of potentials	1
Pin layout	Linear pinning
Solder pins per potential	4

### Electrical properties

#### Properties

Nominal current $I_N$	76 A
Nominal voltage $U_N$	1000 V (800 V when using the plug-in bridge)
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	8 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 rigid	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
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## Pin layout

## Linear pinning

### 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	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

Color (Housing)	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

#### Material data – actuating element

Color (Actuating element)	green (6021)
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### Dimensions

Dimensional drawing	
Pitch	15 mm
Width [w]	16.7 mm
Height [h]	33.5 mm
Length [l]	33.4 mm
Installed height	27 mm
Solder pin length [P]	6.5 mm
Pin dimensions	1.2 x 1.4 mm

#### PCB design

Pin spacing	15 mm
Hole diameter	2.2 mm

### Mechanical tests

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## 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
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)	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
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	8 kV
minimum clearance value - non-homogenous field (II/2)	8 mm
minimum creepage distance (II/2)	8 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:1995-03
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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 60998-2-2:1991-10
Temperature	850 °C
Time of exposure	5 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 ... 55 °C

## Packaging specifications

Type of packaging	packed in cardboard
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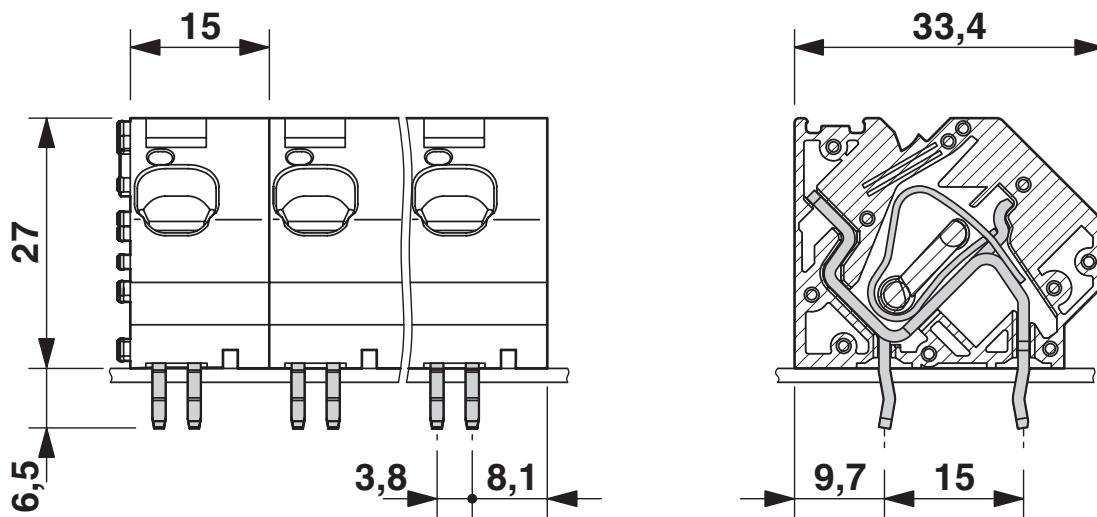
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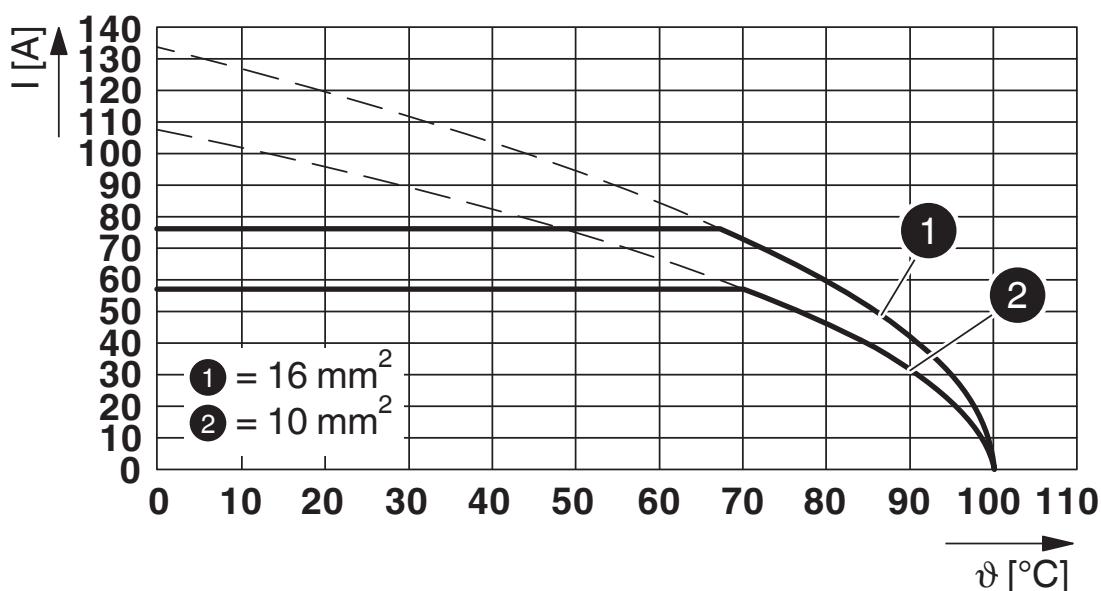


## Drawings

Dimensional drawing



Diagram



Type: ZFKDS 10-15,00

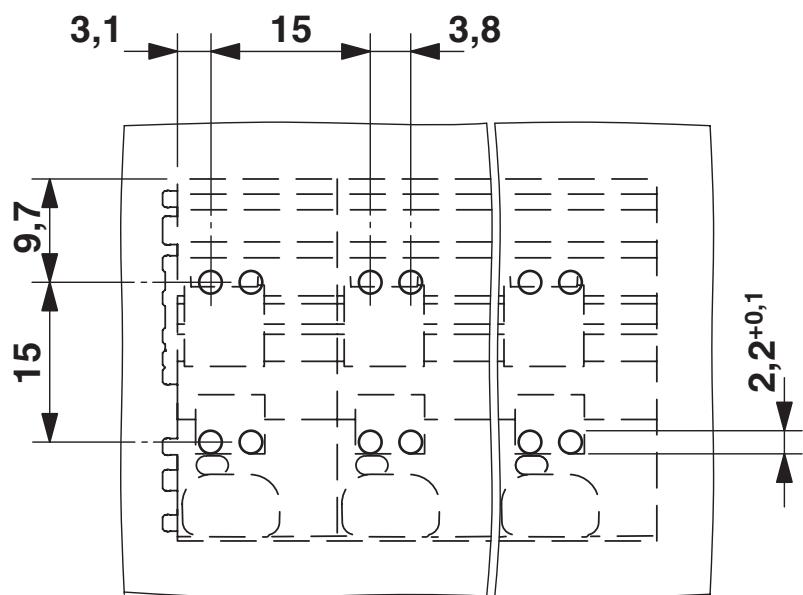
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Drilling plan/solder pad geometry



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## Approvals

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cULus Recognized				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	600 V	65 A	24 - 6	-
C	600 V	65 A	24 - 6	-
D	300 V	10 A	24 - 6	-

VDE report with production monitoring				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine	1000 V	76 A	-	0.2 - 16

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## Classifications

### ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

### ETIM

ETIM 9.0	EC002643
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### 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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### EF3.0 Climate Change

CO2e kg	0.201 kg CO2e
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