

# ZFKDS 1-W-3,81 - PCB terminal block



1705003

<https://www.phoenixcontact.com/us/products/1705003>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Printed circuit board terminal, nominal current: 12 A, rated voltage (III/2): 200 V, nominal cross section: 1 mm<sup>2</sup>, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: ZFKDS(A) 1-W, pitch: 3.81 mm, connection method: Spring-cage connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard. Single module for the custom grouping of different numbers of positions. An end terminal block is also needed to terminate the block (see accessories). Blocked items with different numbers of positions are also available.

## Your advantages

- Defined contact force ensures that contact remains stable over the long term
- Can be operated without tools by means of color-coded actuating lever
- Angled connection enables multi-row arrangement on the PCB
- The latching on the side enables various numbers of positions to be combined
- Two solder pins reduce the mechanical strain on the soldering spots

## Commercial data

Item number	1705003
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA12
Product key	AALMAF
GTIN	4017918136222
Weight per piece (including packing)	1.097 g
Weight per piece (excluding packing)	1.086 g
Customs tariff number	85369010
Country of origin	PL

# ZFKDS 1-W-3,81 - PCB terminal block



1705003

<https://www.phoenixcontact.com/us/products/1705003>

## Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	ZFKDS(A) 1-W
Product line	COMBICON Terminals S
Type	PC terminal block can be aligned
Number of positions	1
Pitch	3.81 mm
Number of connections	1
Number of rows	1
Number of potentials	1
Pin layout	Linear pinning
Solder pins per potential	2

### Electrical properties

#### Properties

Nominal current $I_N$	12 A
Nominal voltage $U_N$	200 V
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	200 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV

### Connection data

#### Connection technology

Type	PC terminal block can be aligned
Nominal cross section	1 mm <sup>2</sup>

#### Conductor connection

Connection method	Spring-cage connection
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Conductor cross section AWG	26 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Stripping length	7.5 mm

### Mounting

Mounting type	Wave soldering
---------------	----------------

# ZFKDS 1-W-3,81 - PCB terminal block



1705003

<https://www.phoenixcontact.com/us/products/1705003>

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)

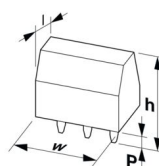
### Material data - housing

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)
---------------------------	--------------

## Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	3.81 mm
Height [h]	19.5 mm
Length [l]	17.5 mm
Installed height	16 mm
Solder pin length [P]	3.5 mm
Pin dimensions	0.7 x 1 mm

### PCB design

Hole diameter	1.2 mm
---------------	--------

## Electrical tests

Air clearances and creepage distances |

# ZFKDS 1-W-3,81 - PCB terminal block



1705003

<https://www.phoenixcontact.com/us/products/1705003>

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2 mm
Rated insulation voltage (III/2)	200 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.5 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2 mm

## Environmental and real-life conditions

### 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
-------------------	---------------------

# ZFKDS 1-W-3,81 - PCB terminal block

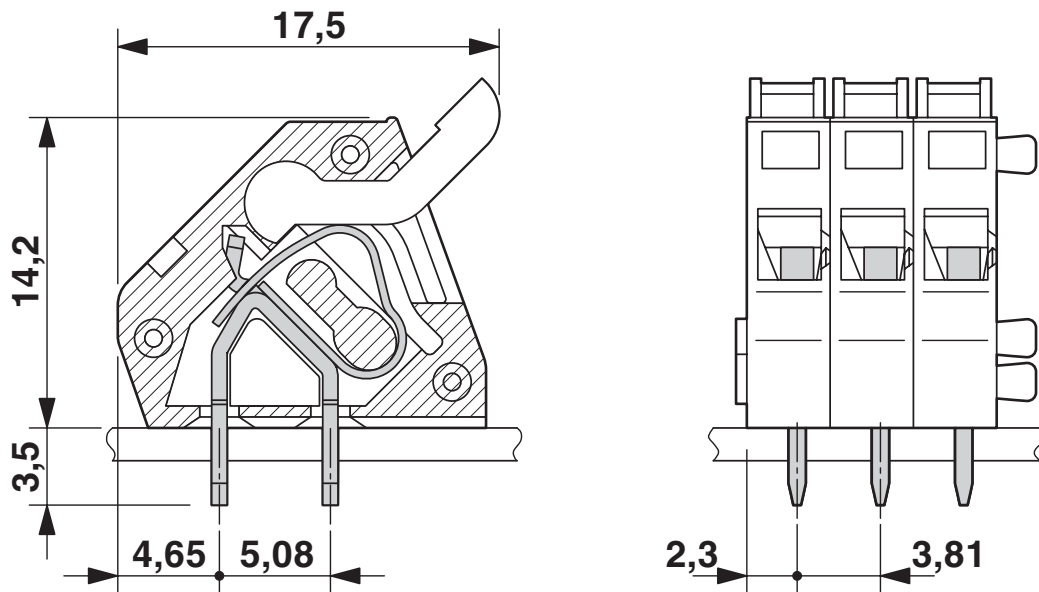
1705003

<https://www.phoenixcontact.com/us/products/1705003>

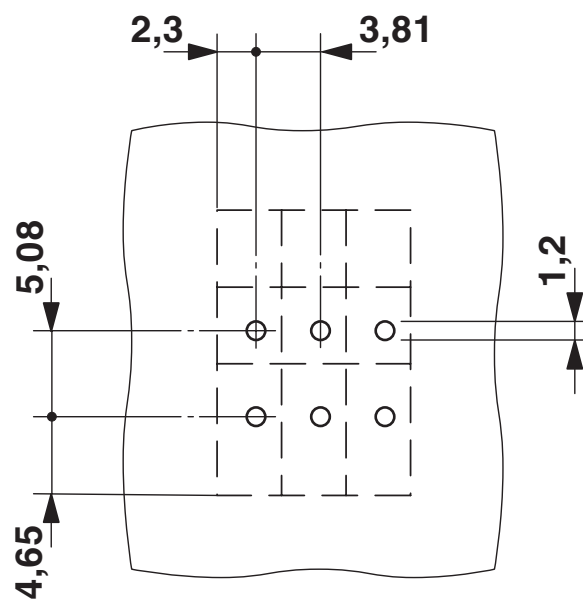


## Drawings

Dimensional drawing



Drilling plan/solder pad geometry



# ZFKDS 1-W-3,81 - PCB terminal block


1705003

<https://www.phoenixcontact.com/us/products/1705003>



## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1705003>

<div> <b>cULus Recognized</b> Approval ID: E60425-19941111</div>				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B				
	250 V	10 A	26 - 12	-
D				
	300 V	10 A	26 - 12	-

# ZFKDS 1-W-3,81 - PCB terminal block



1705003

<https://www.phoenixcontact.com/us/products/1705003>

## Classifications

### ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

### ETIM

ETIM 9.0	EC002643
----------	----------

### UNSPSC

UNSPSC 21.0	39121400
-------------	----------

# ZFKDS 1-W-3,81 - PCB terminal block



1705003  
<https://www.phoenixcontact.com/us/products/1705003>

## Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
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%
EF3.0 Climate Change	
CO2e kg	0.016 kg CO2e

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)