

MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

<https://www.phoenixcontact.com/us/products/1727269>

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.



PCB terminal block, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1 mm², number of potentials: 5, number of rows: 1, number of positions per row: 5, product range: MKDS 1/..-SMD, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: SMD soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pad geometry, number of solder pins per potential: 1, type of packaging: Tube magazine

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Extremely small design for the respective conductor cross section
- Designed for integration into the SMT soldering process

Commercial data

Item number	1727269
Packing unit	20 pc
Minimum order quantity	20 pc
Note	Made to order (non-returnable)
Sales key	AA12
Product key	AALHAB
Catalog page	Page 82 (C-1-2013)
GTIN	4017918025632
Weight per piece (including packing)	5.82 g
Weight per piece (excluding packing)	4.235 g
Customs tariff number	85369010
Country of origin	PL

MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

<https://www.phoenixcontact.com/us/products/1727269>

Technical data

Product properties

Product type	Printed circuit board terminal
Product family	MKDS 1/..-SMD
Product line	COMBICON Terminals S
Type	PC termination block
Number of positions	5
Pitch	3.81 mm
Number of connections	5
Number of rows	1
Number of potentials	5
Pin layout	Linear pad geometry
Solder pins per potential	1

Data management status

Article revision	04
------------------	----

Electrical properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV

Connection data

Connection technology

Type	PC termination block
Nominal cross section	1 mm ²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross section rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 1 mm ²
Conductor cross section AWG	26 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 0.5 mm ²
2 conductors with same cross section, solid	0.14 mm ² ... 0.5 mm ²
2 conductors with same cross section, flexible	0.14 mm ² ... 0.2 mm ²
Stripping length	5 mm

MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

<https://www.phoenixcontact.com/us/products/1727269>

Drive form screw head	Slotted (L)
Tightening torque	0.22 Nm ... 0.25 Nm

Mounting

Mounting type	SMD soldering
Pin layout	Linear pad geometry

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
Metal surface terminal point (top layer)	Tin (5 - 7 μm Sn)
Metal surface terminal point (middle layer)	Nickel (2 - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (5 - 7 μm Sn)
Metal surface soldering area (middle layer)	Nickel (2 - 3 μm Ni)

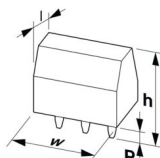
Material data - housing

Color (Housing)	black (9005)
Insulating material	PA
Insulating material group	IIIa
CTI according to IEC 60112	250
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

Note on application	Pick and place pads may protrude beyond the components. The PCB layout must ensure that collisions are avoided when components are assembled.
---------------------	---

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	19.04 mm
Height [h]	9.2 mm
Length [l]	7.3 mm

MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

<https://www.phoenixcontact.com/us/products/1727269>

Installed height	9.2 mm
PCB design	
Pad geometry	1.5 x 2.5 mm

Electrical tests

Air clearances and creepage distances |

Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 250
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)	2.5 mm
Rated insulation voltage (III/2)	160 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)	1.6 mm
Rated insulation voltage (II/2)	250 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)	2.5 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	Tube magazine
-------------------	---------------

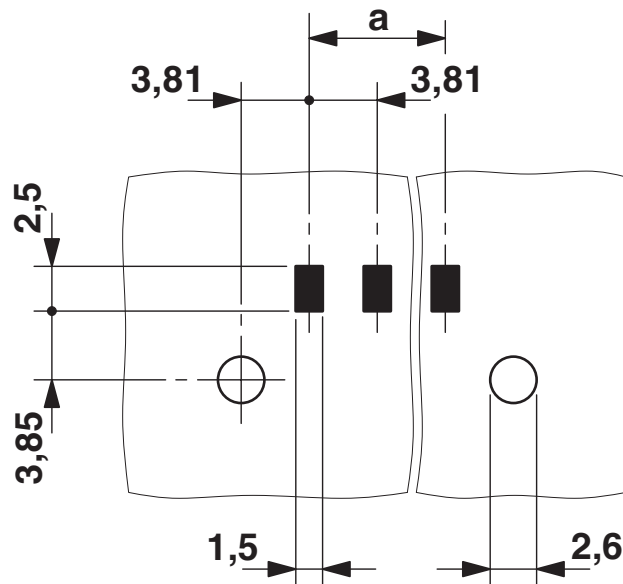
MKDS 1/ 5-3,81 SMD BK - PCB terminal block

1727269

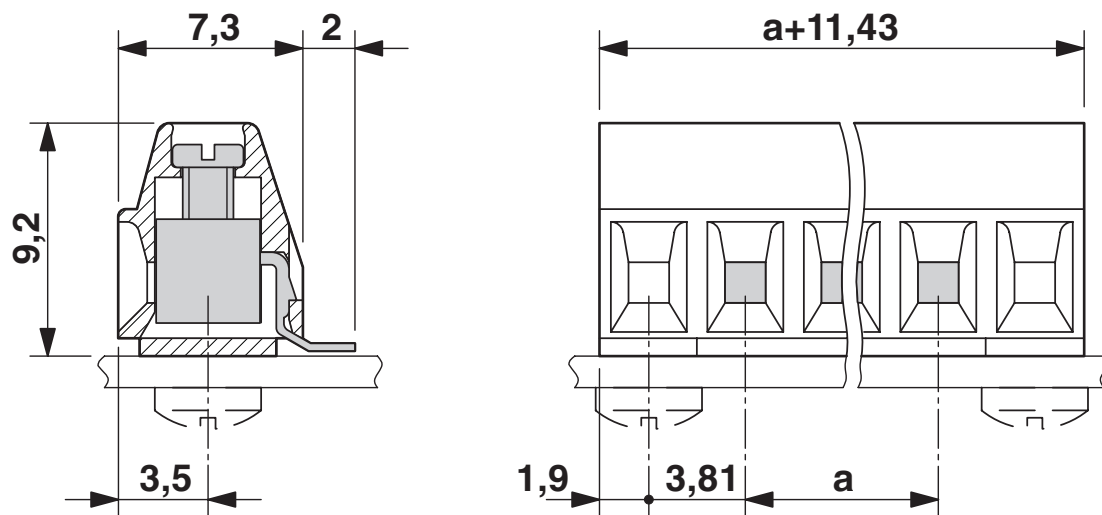
<https://www.phoenixcontact.com/us/products/1727269>

Drawings

Drilling plan/solder pad geometry



Dimensional drawing



MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

<https://www.phoenixcontact.com/us/products/1727269>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1727269>

 cULus Recognized Approval ID: E60425-19770427				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
Only flexible conductors	300 V	13.5 A	30 - 16	-
Standard	300 V	10 A	30 - 16	-
Use group D				
Only flexible conductors	150 V	13.5 A	30 - 16	-
Standard	300 V	10 A	30 - 16	-

 VDE Zeichengenehmigung Approval ID: 40055394				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	200 V	17.5 A	-	0.2 - 1.5

MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

<https://www.phoenixcontact.com/us/products/1727269>

Classifications

ECLASS

ECLASS-11.0	27460101
ECLASS-12.0	27460101
ECLASS-13.0	27460101

ETIM

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

UNSPSC

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

MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

<https://www.phoenixcontact.com/us/products/1727269>

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%

MKDS 1/ 5-3,81 SMD BK - PCB terminal block



1727269

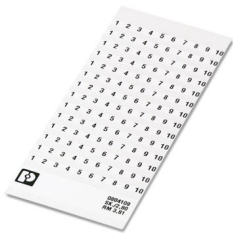
<https://www.phoenixcontact.com/us/products/1727269>

Accessories

SK 3,81/2,8:FORTL.ZAHLEN - Marker card

0804109

<https://www.phoenixcontact.com/us/products/0804109>



Marker card, Sheet, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 .. 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm, Number of individual labels: 14

SZS 0,4X2,5 VDE - Screwdriver

1205037

<https://www.phoenixcontact.com/us/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

Phoenix Contact 2024 © - 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