

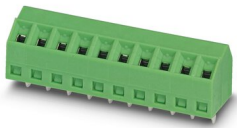
PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

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: 10 A, rated voltage (III/2): 200 V, nominal cross section: 1 mm², number of potentials: 2, number of rows: 1, number of positions per row: 2, product range: SMKDS 1, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 35 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Angled connection enables multi-row arrangement on the PCB
- Extremely small design for the respective conductor cross section

PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

Commercial Data

Item number	1751099
Packing unit	1 pc
Minimum order quantity	250 pc
Sales Key	A01
Product Key	AALFFF
Catalog Page	Page 85 (C-1-2013)
GTIN	4017918103699
Weight per Piece (including packing)	1.192 g
Weight per Piece (excluding packing)	1.1 g
Customs tariff number	85369010
Country of origin	DE

PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

Technical Data

Product properties

Type	PC termination block
Product line	COMBICON Terminals S
Product type	Printed circuit board terminal
Number of positions	2
Pitch	3.5 mm
Number of connections	2
Number of rows	1
Number of potentials	2
Pin layout	Linear pinning

Electrical properties

Nominal current I_N	10 A
Nominal voltage U_N	200 V
Pollution degree	3
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

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 solid	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
Torque	0.22 Nm ... 0.25 Nm

Mounting

Mounting type Wave soldering	Wave soldering
Mounting type	Wave soldering
Drive form screw head	Slotted (L)

PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

Processing notes

Process	Wave soldering
---------	----------------

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)

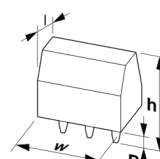
Material data - housing

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

Notes

Note on application	For safe conductor connection, always adhere to a defined tightening torque. Particularly in the case of PCB terminal blocks with two or three positions, the individual solder pin for each contact point cannot compensate for this. That is why the terminal blocks must be supported during conductor connection (held with one hand, support on the housing).
---------------------	--

Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	7.5 mm
Height [h]	13 mm
Length [l]	10 mm
Installed height	9.5 mm

PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

Solder pin length [P]	3.5 mm
-----------------------	--------

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60998-2-1:1990-04
Result	Test passed

Pull-out test

Specification	IEC 60998-2-1:1990-04
Conductor cross section/conductor type/tractive force setpoint/actual value	0.14 mm ² / solid / > 10 N
	0.14 mm ² / flexible / > 10 N
	1.5 mm ² / solid / > 40 N
	1 mm ² / flexible / > 35 N

Torque test

Specification	IEC 60998-2-1:1990-04
---------------	-----------------------

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 60998-2-1:1990-04
Insulation resistance, neighboring positions	10 ⁹ Ω

Air clearances and creepage distances |

Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
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
Note on connection cross section	With connected conductor 1.5 mm ² (stranded).
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

PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

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 60998-2-1:1990-04
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 ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
-------------------	---------------------

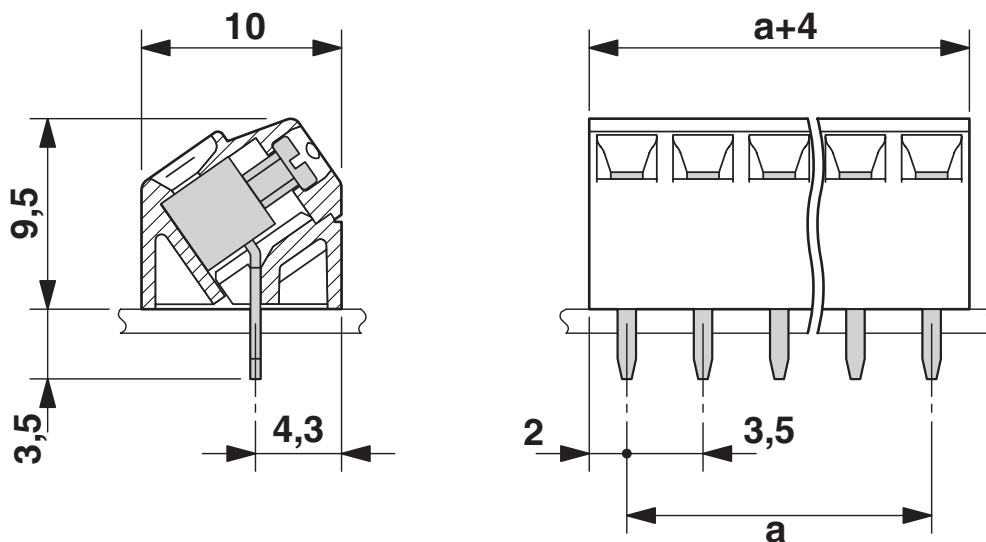
PCB terminal block - SMKDS 1/ 2-3,5

1751099

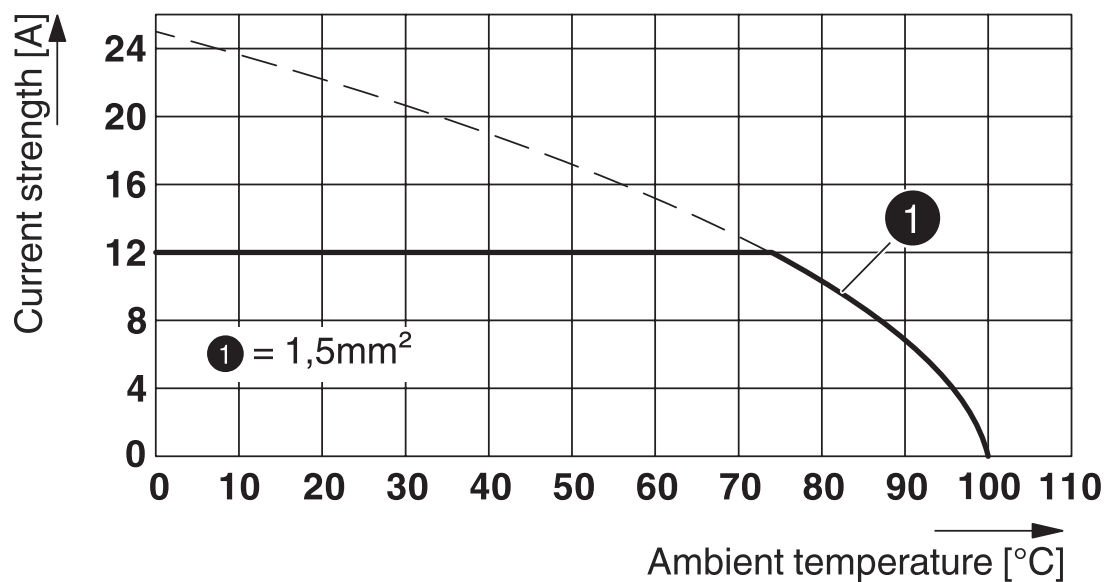
<https://www.phoenixcontact.com/us/products/1751099>

Drawings

Dimensional drawing



Diagram



Type: SMKDS 1/5-3,5

Tested according to DIN EN 60512-5-2:2003-01

Reduction factor = 1

Number of positions: 5

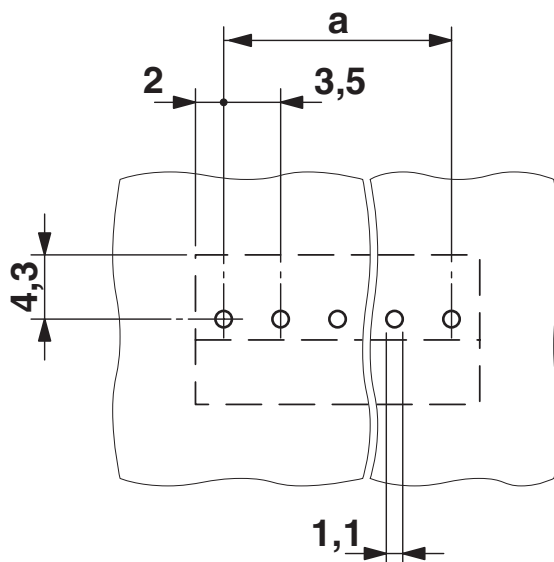
PCB terminal block - SMKDS 1/ 2-3,5

1751099

<https://www.phoenixcontact.com/us/products/1751099>



Drilling plan/solder pad geometry




PCB terminal block - SMKDS 1/ 2-3,5





1751099

<https://www.phoenixcontact.com/us/products/1751099>

Approvals

 CSA Approval ID: 13631				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B	150 V	10 A	28 - 16	-
Use group D	300 V	10 A	28 - 16	-

 EAC Approval ID: B.01687				
--	--	--	--	--

 cULus Recognized Approval ID: E60425-19770427				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B	300 V	10 A	30 - 16	-
Use group D	300 V	10 A	30 - 16	-

PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

Classifications

ECLASS

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

ETIM

ETIM 8.0	EC002643
----------	----------

UNSPSC

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

PCB terminal block - SMKDS 1/ 2-3,5



1751099

<https://www.phoenixcontact.com/us/products/1751099>

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

PCB terminal block - SMKDS 1/ 2-3,5



1751099

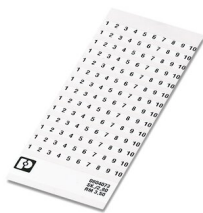
<https://www.phoenixcontact.com/us/products/1751099>

Accessories

Marker card

Marker card - SK 3,5/2,8:FORTL.ZAHLEN - 0804073

<https://www.phoenixcontact.com/us/products/0804073>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 3.5 mm, lettering field size: 3.5 x 2.8 mm

Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 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 2022 © - 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