

SMKDS 3/10 - PCB terminal block

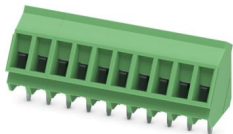
1704778

<https://www.phoenixcontact.com/us/products/1704778>

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Printed circuit board terminal, nominal current: 24 A, rated voltage (III/2): 400 V, nominal cross section: 2.5 mm², number of rows: 1, pitch: 5 mm, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 55 °, Solder pin [P]: 4.5 mm, number of solder pins per potential: 1



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
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve
- The latching on the side enables various numbers of positions to be combined

Commercial data

Item number	1704778
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA13
Product key	AAMFIP
GTIN	4055626272269
Weight per piece (including packing)	21 g
Weight per piece (excluding packing)	21 g
Country of origin	DE

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Technical data

Product properties

Product type	Printed circuit board terminal
Product family	SMKDS 3
Product line	COMBICON Terminals M
Pitch	5 mm
Number of rows	1
Solder pins per potential	1

Electrical properties

Properties

Nominal current I_N	24 A
Nominal voltage U_N	400 V
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

Connection data

Connection technology

Type	PC terminal block can be aligned
Nominal cross section	2.5 mm ²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross-section rigid	0.2 mm ² ... 4 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 2.5 mm ²
2 conductors with same cross section, rigid	0.2 mm ² ... 1.5 mm ²
2 conductors with same cross section, flexible	0.2 mm ² ... 1.5 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.75 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 1.5 mm ²
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm

Mounting

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Mounting type	Wave soldering
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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 (4 μm - 8 μm Sn)
Metal surface soldering area (top layer)	Tin (4 μm - 8 μm Sn)

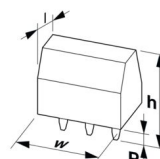
Material data - housing

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).
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Dimensions

Dimensional drawing	
Pitch	5 mm
Width [w]	50 mm
Height [h]	22.37 mm
Length [l]	15.68 mm
Installed height	17.87 mm
Solder pin length [P]	4.5 mm
Pin dimensions	0.9 x 0.9 mm

PCB design

Hole diameter	1.3 mm
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Electrical tests

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)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.2 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)	630 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm

Environmental and real-life conditions

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)

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Approvals

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 CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B	300 V	10 A	28 - 12	-
D	300 V	10 A	28 - 12	-

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Classifications

ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

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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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