

1831099

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Printed circuit board terminal, nominal current: 17.5 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm², number of rows: 1, number of positions per row: 18, product range: MKDSN 1,5, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: H1L Slotted Phillips recess, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: light gray, 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
- Extremely small design for the respective conductor cross-section
- The latching on the side enables various numbers of positions to be combined

Commercial data

Item number	1831099
Packing unit	20 pc
Minimum order quantity	20 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	AALFHD
GTIN	4046356981149
Weight per piece (including packing)	16.325 g
Weight per piece (excluding packing)	15.265 g
Customs tariff number	85369010
Country of origin	DE



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Technical data

Product properties

Product type	Printed circuit board terminal
Product family	MKDSN 1,5
Product line	COMBICON Terminals S
Туре	PC termination block
Number of positions	18
Pitch	5.08 mm
Number of rows	1
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Properties

<u> </u>	
Nominal current I _N	17.5 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

ferrule with plastic sleeve

Stripping length

2 conductors with the same cross section, flexible, with TWIN

Туре	PC termination block
Nominal cross section	1.5 mm²
Conductor connection	
Connection method	Screw connection with tension sleeve
Conductor cross-section rigid	0.14 mm² 1.5 mm²
Conductor cross-section flexible	0.14 mm² 1.5 mm²
Conductor cross-section AWG	26 16
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm² 1 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² 1.5 mm²
2 conductors with same cross section, solid	0.14 mm² 0.75 mm²
2 conductors with same cross section, flexible	0.14 mm² 0.75 mm²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm² 0.5 mm²

0.5 mm² ... 0.75 mm²

6 mm



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Pitch

Width [w]

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Drive form screw head	Slotted Phillips recess (H1L)
Tightening torque	0.5 Nm 0.6 Nm
ounting	
Mounting type	Wave soldering
Pin layout	Linear pinning
	Linear pirining
terial 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)	light gray (7035)
Insulating material	PA
Insulating material group	1
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
tes	
Note on application	For safe conductor connection, always adhere to a defined tightening torque. Particularly in the case of PCB terminal block 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).
nensions	
Dimensional drawing	h

5.08 mm

91.44 mm



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Height [h]	13.5 mm
Length [I]	8.15 mm
Installed height	10 mm
Solder pin length [P]	3.5 mm
Pin dimensions	0.5 x 1 mm
PCB design	
Hole diameter	1.3 mm

Mechanical tests

Test for conductor damage and slackening

minimum clearance value - non-homogenous field (III/3)

minimum creepage distance (III/3)

Note on connection cross section

Rated insulation voltage (III/2)

Rated surge voltage (III/2)

Specification	IEC 60999-1:1999-11
Result	Test passed
Pull-out test	
Specification	IEC 60999-1:1999-11
Conductor cross-section/conductor type/tractive force setpoint/actual value	0.14 mm² / solid / > 10 N
	0.14 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N

 $1.5 \text{ mm}^2 / \text{flexible} / > 40 \text{ N}$

Electrical tests

Temperature-rise test	
Specification	IEC 60947-7-4:2019-01
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.
Short-time withstand current	
Specification	IEC 60947-7-4:2019-01
Insulation resistance	
Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ
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)	250 V
Rated surge voltage (III/3)	4 kV

3 mm

3.2 mm

400 V

4 kV

With connected conductor 1.5 mm² (solid).



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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

	test

Specification	IEC 60068-2-6:2007-12
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 60695-2-10:2013-04
Temperature	850 °C
Time of exposure	5 s

Aging

Specification	IEC 60947-7-4:2019-01
Ambient conditions	
Ambient temperature (operation)	-40 °C 105 °C (Depending on the current carrying capacity/derating curve)

	C 105 °C (Depending on the current carrying city/derating curve)
Ambient temperature (storage/transport) -40 °C	C 70 °C
Relative humidity (storage/transport) 30 %	70 %
Ambient temperature (assembly) -5 °C	100 °C

Packaging specifications

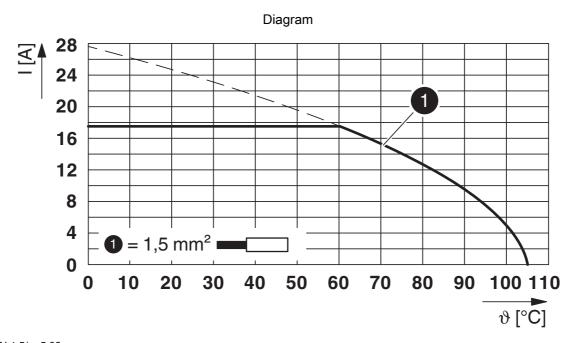
Type of packaging	packed in cardboard
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Drawings



Type: MKDSN 1,5/...-5,08



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Classifications

ECLASS

	ECLASS-13.0	27460101		
	ECLASS-15.0	27460101		
ETIM				
	ETIM 9.0	EC002643		
UN	ISPSC			

UNSPSC 21.0 39121400



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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%	

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