

1800114

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Printed circuit board terminal, nominal current: 13.5 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm², number of potentials: 2, number of rows: 1, number of positions per row: 2, product range: MKKDSNH 1,5, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. The article can be aligned to create different nos. of positions!

### 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
- · Tall type enables conductor connection for sealed PCBs
- The latching on the side enables various numbers of positions to be combined

#### Commercial data

Item number	1800114
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA12
Product key	AALFJN
GTIN	4017918978518
Weight per piece (including packing)	2.77 g
Weight per piece (excluding packing)	2.37 g
Customs tariff number	85369010
Country of origin	CN



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### Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	MKKDSNH 1,5
Product line	COMBICON Terminals S
Туре	PC terminal block can be aligned
Number of positions	2
Pitch	5.08 mm
Number of connections	2
Number of rows	1
Number of potentials	2
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current I <sub>N</sub>	13.5 A
Nominal voltage U <sub>N</sub>	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

Туре	PC terminal block can be aligned
Nominal cross section	1.5 mm²
Conductor connection	

#### Conductor connection

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



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2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> 1 mm <sup>2</sup> (1st level: 0.5 mm <sup>2</sup> 1 mm <sup>2</sup> / 2nd level: 0. 5 mm <sup>2</sup> )
Stripping length	6 mm
Drive form screw head	Slotted (L)
Tightening torque	0.5 Nm 0.6 Nm

### Mounting

Mounting type	Wave soldering
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	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	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

#### **Dimensions**

Dimensional drawing	h h
Pitch	5.08 mm
Width [w]	10.16 mm
Height [h]	22.6 mm
Length [I]	8.6 mm
Installed height	19.1 mm
Solder pin length [P]	3.5 mm



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Pin dimensions	0.5 x 1 mm	
PCB design		
Hole diameter	1.3 mm	
Mechanical tests		
Test for conductor damage and slackening		
Specification	IEC 60998-2-1:2002-12	
Result	Test passed	
Pull-out test	150 00000 0 1 0000 10	
Specification	IEC 60998-2-1:2002-12	
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 mm² / flexible / > 40 N	
Torque test		
Specification	IEC 60998-2-1:2002-12	
Electrical tests		
Temperature-rise test		
Specification	IEC 60998-1:2002-12	
Requirement temperature-rise test	Increase in temperature ≤ 45 K	
Landa Cara and Cara		
Insulation resistance	IEC 60998-1:2002-12	
Specification  Insulation resistance, neighboring positions	10 <sup>9</sup> Ω	
insulation resistance, neighboring positions	10 12	
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	
Note on connection cross section	With connected conductor 1.5 mm² (solid).	
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	



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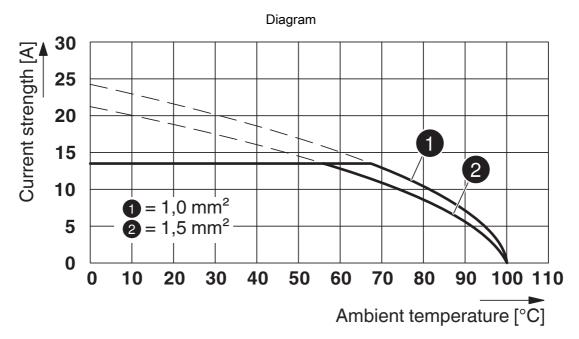
minimum creepage distance (II/2)		3.2 mm
Environmental and real-life condit	ions	
Vibration test		
Specification		IEC 60068-2-6:1995-03
Frequency		10 - 150 - 10 Hz
Sweep speed		1 octave/min
Amplitude		0.35 mm (10 Hz 60.1 Hz)
Acceleration		5g (60.1 Hz 150 Hz)
Test duration per axis		2.5 h
Test directions		X-, Y- and Z-axis
Glow-wire test		
Specification		IEC 60998-1:2002-12
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/transp	port)	-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



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## **Drawings**



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

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

Reduction factor = 1 Number of positions: 5



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## **Approvals**

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cULus Recognized Approval ID: E60425-19770427					
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>	
В					
Screw connection	300 V	10 A	30 - 14	-	
2 conductors with the same cross-section	300 V	10 A	- 18	-	
D					
Screw connection	300 V	10 A	30 - 14	-	
2 conductors with the same cross-section	300 V	10 A	- 18	-	



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## Classifications

#### **ECLASS**

	ECLASS-13.0	27460101		
	ECLASS-15.0	27460101		
ETIM				
	ETIM 9.0	EC002643		
UNSPSC				
Uľ	NSPSC			
	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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