

MKDSP 10N/ 3-10,16 - PCB terminal block



1774137
<https://www.phoenixcontact.com/pc/products/1774137>

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PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of potentials: 3, number of rows: 1, number of positions per row: 3, product range: MKDSP 10N, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 5 mm, number of solder pins per potential: 2, 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
- Quick and convenient testing using integrated test option
- The latching on the side enables various numbers of positions to be combined
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve

Commercial data

Item number	1774137
Packing unit	50 pc
Minimum order quantity	1 pc
Product key	AANFFF
Catalog page	Page 451 (C-1-2013)
GTIN	4046356481588
Weight per piece (including packing)	22.741 g
Weight per piece (excluding packing)	21.86 g
Customs tariff number	85369010
Country of origin	PL

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Technical data

Product properties

Product type	Printed circuit board terminal
Product family	MKDSP 10N
Product line	COMBICON Terminals L
Type	PC terminal block can be aligned
Number of positions	3
Pitch	10.16 mm
Number of connections	3
Number of rows	1
Number of potentials	3
Pin layout	Linear pinning
Solder pins per potential	2

Electrical properties

Nominal current I_N	76 A
Nominal voltage U_N	1000 V
Rated voltage (III/3)	690 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

Connection data

Connection technology

Type	PC terminal block can be aligned
Nominal cross section	16 mm ²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross section rigid	0.5 mm ² ... 16 mm ²
Conductor cross section flexible	0.5 mm ² ... 16 mm ²
Conductor cross section AWG	20 ... 6
Conductor cross section flexible, with ferrule without plastic sleeve	0.5 mm ² ... 16 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.5 mm ² ... 16 mm ²
2 conductors with same cross section, solid	0.5 mm ² ... 4 mm ²
2 conductors with same cross section, flexible	0.5 mm ² ... 4 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.5 mm ² ... 2.5 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 6 mm ²

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Stripping length	10 mm
Drive form screw head	Slotted (L)
Tightening torque	1.2 Nm ... 1.5 Nm

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

Material specifications

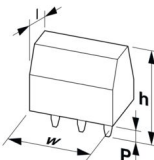
Material data - contact

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)	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

Dimensions

Dimensional drawing	
Pitch	10.16 mm
Width [w]	30.48 mm
Height [h]	34.3 mm
Length [l]	18.4 mm
Installed height	29.3 mm
Solder pin length [P]	5 mm
Pin dimensions	1 x 0.9 mm

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PCB design

Hole diameter	1.5 mm
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Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60998-2-1:2002-12
Result	Test passed

Pull-out test

Specification	IEC 60998-2-1:2002-12
Conductor cross section/conductor type/tractive force setpoint/actual value	0.5 mm ² / solid / > 20 N
	0.5 mm ² / flexible / > 20 N
	16 mm ² / solid / > 100 N
	16 mm ² / flexible / > 100 N

Torque test

Specification	IEC 60998-2-1:2002-12
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Electrical tests

Temperature-rise test

Specification	IEC 60998-1:2002-12
Requirement temperature-rise test	Increase in temperature ≤ 45 K

Insulation resistance

Specification	IEC 60998-1:2002-12
Insulation resistance, neighboring positions	> 5 MΩ

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)	690 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	8 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

Environmental and real-life conditions

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Vibration 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

Glow-wire test

Specification	IEC 60998-1:2002-12
Temperature	850 °C
Time of exposure	5 s

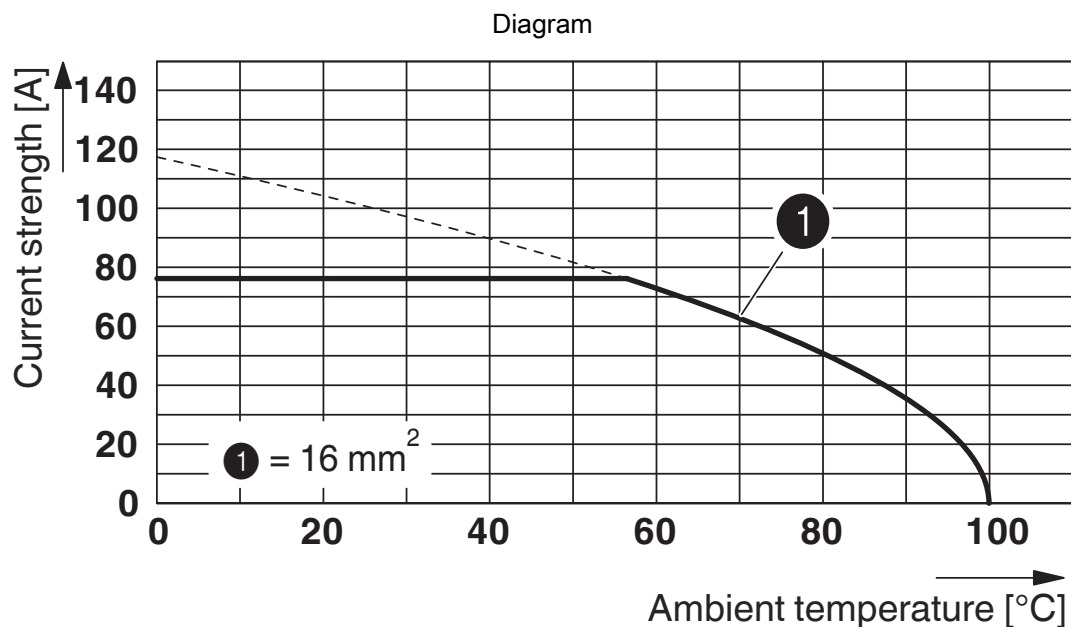
Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/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
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Drawings



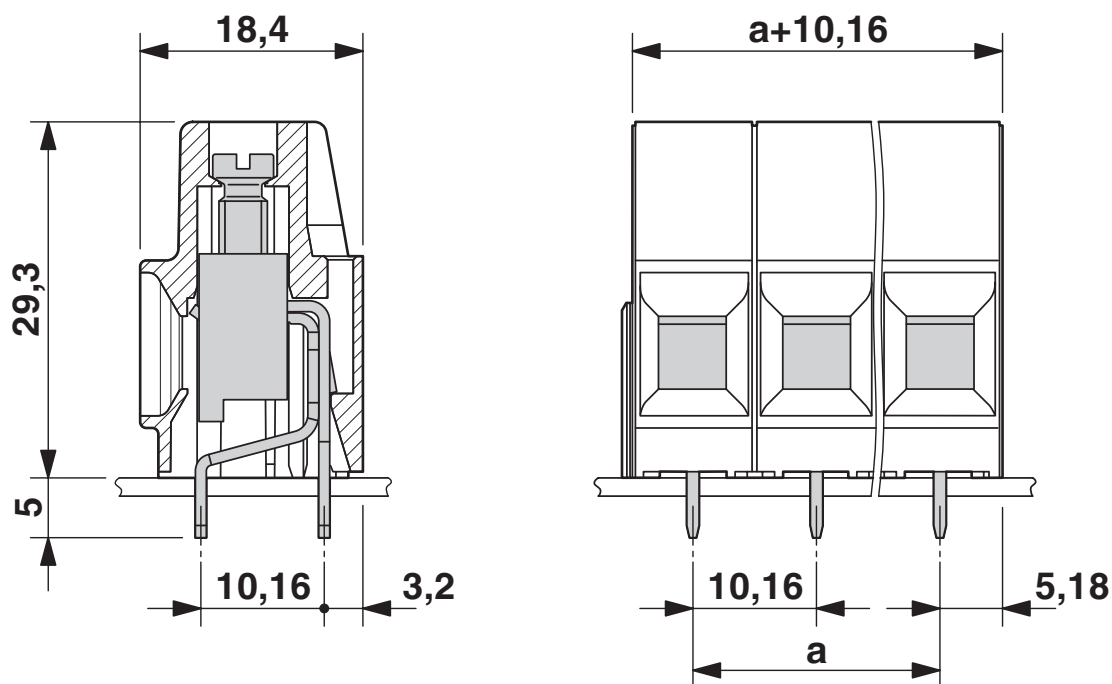
Type: MKDSP 10N/...-10,16

Tested in accordance with DIN EN 60512-5-2:2003-01

Reduction factor = 1

No. of positions: 5

Dimensional drawing



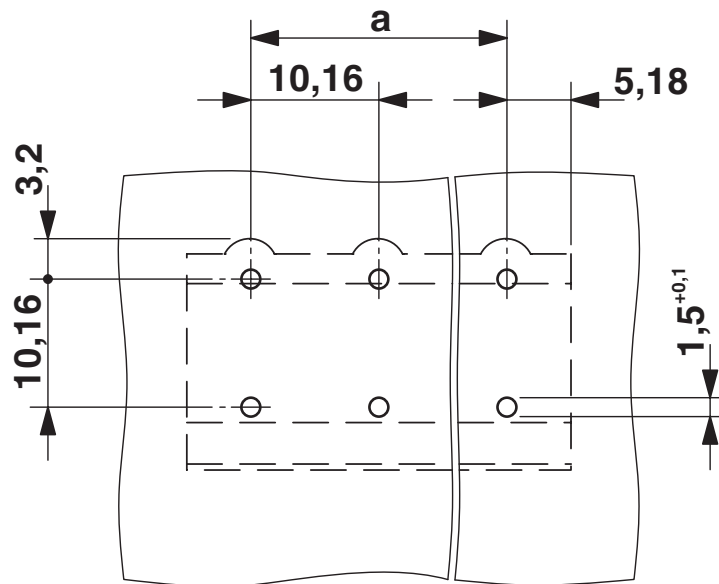
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Drilling plan/solder pad geometry



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1774137>

 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	60 A	20 - 6	-
Use group C	300 V	60 A	20 - 6	-
Use group D	600 V	5 A	20 - 6	-

 VDE Gutachten mit Fertigungsüberwachung Approval ID: 40035740				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	1000 V	76 A	-	0.5 - 16

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002643
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UNSPSC

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%
EF3.0 Climate Change	
CO2e kg	0.074 kg CO2e

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