

PCB terminal block - MKKDS 1,5/ 2

1725012

<https://www.phoenixcontact.com/us/products/1725012>

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PCB terminal block, nominal current: 17.5 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm², number of potentials: 4, number of rows: 2, number of positions per row: 2, product range: MKKDS 1,5, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, 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. 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
- Conductor connection on several levels enables higher contact density
- The latching on the side enables various numbers of positions to be combined

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Commercial Data

Item number	1725012
Packing unit	1 pc
Minimum order quantity	100 pc
Sales Key	A01
Product Key	AALFJG
Catalog Page	Page 97 (C-1-2013)
GTIN	4017918025267
Weight per Piece (including packing)	6.9 g
Weight per Piece (excluding packing)	6.502 g
Customs tariff number	85369010
Country of origin	DE

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1725012

<https://www.phoenixcontact.com/us/products/1725012>

Technical Data

Product properties

Type	PC terminal block can be aligned
Product line	COMBICON Terminals S
Product type	Printed circuit board terminal
Number of positions	2
Pitch	5 mm
Number of connections	4
Number of rows	2
Number of potentials	4
Pin layout	Linear pinning

Electrical properties

Nominal current I_N	17.5 A
Nominal voltage U_N	400 V
Pollution degree	3
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

Connection data

Connection technology

Type	PC terminal block can be aligned
Nominal cross section	1.5 mm ²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross section solid	0.14 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	26 ... 14
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
2 conductors with same cross section, solid	0.14 mm ² ... 1 mm ²
2 conductors with same cross section, flexible	0.14 mm ² ... 0.75 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.5 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 0.5 mm ²
Stripping length	7 mm
Torque	0.5 Nm ... 0.6 Nm

PCB terminal block - MKKDS 1,5/ 2

1725012

<https://www.phoenixcontact.com/us/products/1725012>

Mounting

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

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

Dimensions

Dimensional drawing	
Pitch	5 mm
Width [w]	12.5 mm
Height [h]	28.7 mm
Length [l]	21.4 mm
Installed height	25.2 mm
Solder pin length [P]	3.5 mm

Mechanical tests

Test for conductor damage and slackening

PCB terminal block - MKKDS 1,5/ 2



1725012

<https://www.phoenixcontact.com/us/products/1725012>

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 mm ² / solid / > 10 N
	0.14 mm ² / flexible / > 10 N
	2.5 mm ² / solid / > 50 N
	1.5 mm ² / flexible / > 40 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
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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
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 2.5 mm ² (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
minimum creepage distance (II/2)	3.2 mm

Environmental and real-life conditions

Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz

PCB terminal block - MKKDS 1,5/ 2



1725012

<https://www.phoenixcontact.com/us/products/1725012>

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 60695-2-10:2013-04
Temperature	850 °C
Time of exposure	5 s

Aging

Specification	IEC 60947-7-4:2019-01
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Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °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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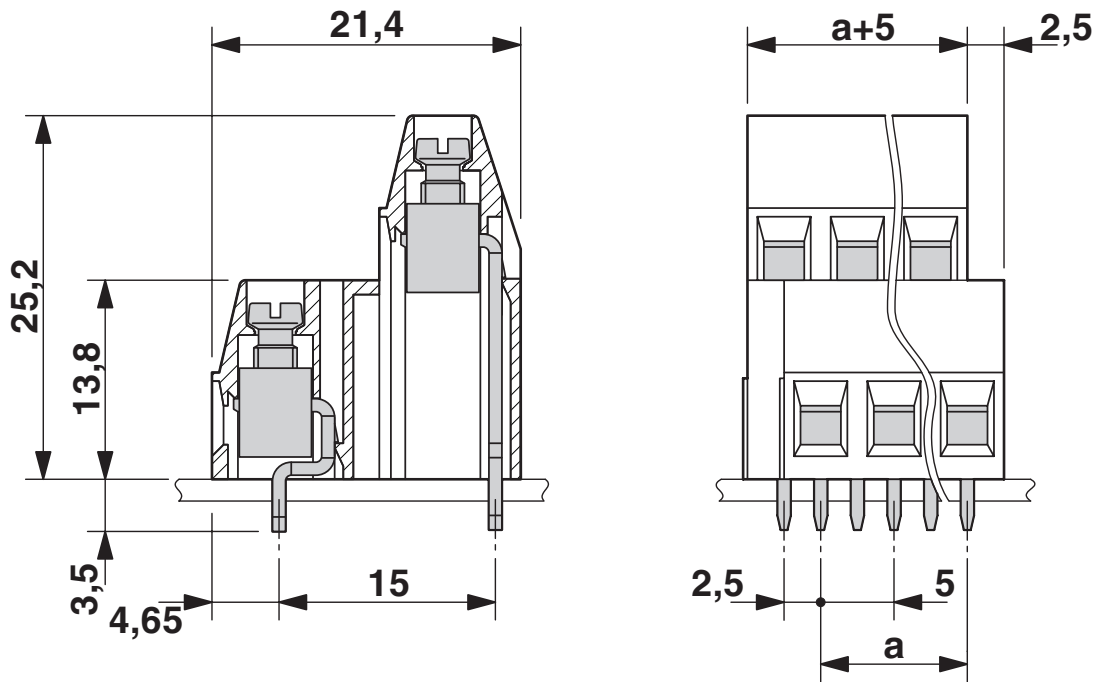
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1725012

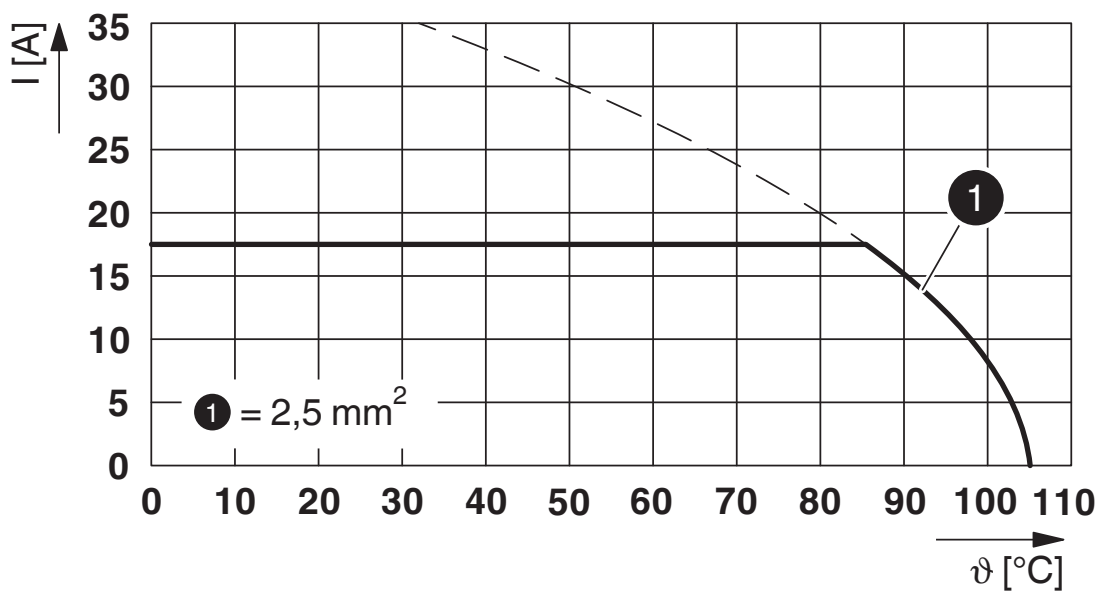
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Drawings

Dimensional drawing



Diagram



Type: MKKDS 1,5/...

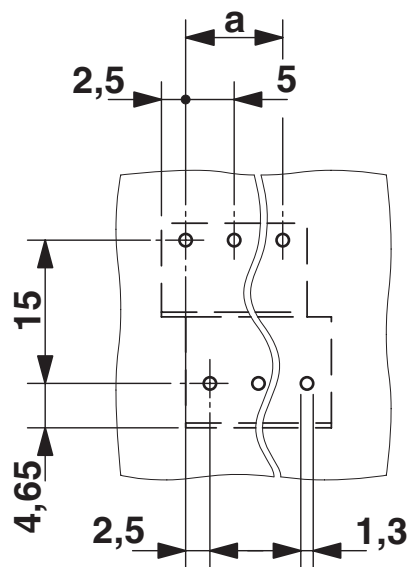
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1725012

<https://www.phoenixcontact.com/us/products/1725012>



Drilling plan/solder pad geometry




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1725012


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Approvals

 CSA Approval ID: 13631				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	300 V	10 A	28 - 14	-
Use group D				
	300 V	10 A	28 - 14	-

 cUL Recognized Approval ID: FILE E 60425				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	125 V	10 A	30 - 14	-
Use group D				
	300 V	10 A	30 - 14	-

 UL Recognized Approval ID: FILE E 60425				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	125 V	10 A	30 - 14	-
Use group D				
	300 V	10 A	30 - 14	-

 EAC Approval ID: B.01687				
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cULus Recognized				
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1725012

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Classifications

ECLASS

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

ETIM

ETIM 8.0	EC002643
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UNSPSC

UNSPSC 21.0	39121400
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PCB terminal block - MKKDS 1,5/ 2



1725012

<https://www.phoenixcontact.com/us/products/1725012>

Environmental Product Compliance

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

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1725012

<https://www.phoenixcontact.com/us/products/1725012>

Accessories

Screwdriver

Screwdriver - SZS 0,6X3,5 - 1205053

<https://www.phoenixcontact.com/us/products/1205053>

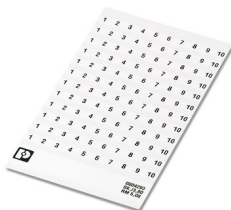


Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

Marker card

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293

<https://www.phoenixcontact.com/us/products/0804293>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

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1725012

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Insertion bridge

Insertion bridge - EBP 2- 5 - 1733169

<https://www.phoenixcontact.com/us/products/1733169>

Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch



Crimping pliers

Crimping pliers - CRIMPFOX 6 - 1212034

<https://www.phoenixcontact.com/us/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

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