PCB terminal block - MKDS 1,5/ 2 - 1715022

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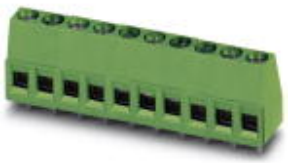
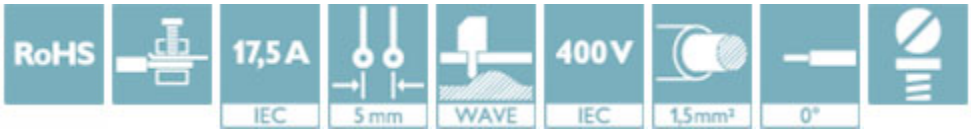


The figure shows a 10-position version of the product

PCB terminal block, nominal current: 17.5 A, nom. voltage: 400 V, pitch: 5 mm, number of positions: 2, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green. 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
- The latching on the side enables various numbers of positions to be combined



Key Commercial Data

Packing unit	1 pc
GTIN	4 017918 024147
GTIN	4017918024147
Weight per Piece (excluding packing)	2.910 g
Custom tariff number	85369010
Country of origin	Germany

Technical data

Item properties

Brief article description	PCB terminal block
Range of articles	MKDS 1,5
Pitch	5 mm
Number of positions	2
Connection method	Screw connection with tension sleeve

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Technical data

Item properties

Drive form screw head	Slotted (L)
Screw thread	M3
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	1

Electrical parameters

Rated current	17.5 A
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV

Connection capacity

Conductor cross section solid	0.14 mm² ... 2.5 mm²
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section AWG / kcmil	26 ... 14
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 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 ... 1 mm²
2 conductors with same cross section, flexible	0.14 mm² ... 0.75 mm²
2 conductors with same cross section, stranded, ferrules without plastic sleeve	0.25 mm² ... 0.5 mm²
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm² ... 1 mm²
Stripping length	7 mm
Torque	0.5 Nm ... 0.6 Nm

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

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Technical data

Material data - housing

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 for the product

Caption	Schematic representation – for additional information, see product range drawing in the Download Center
Length [l]	9.8 mm
Width [w]	10 mm
Height [h]	17.3 mm
Pitch	5 mm
Height (without solder pin)	13.8 mm
Solder pin [P]	3.5 mm
Pin spacing	5 mm
Pin dimensions	0.9 x 0.9 mm
Dimension a	5 mm

Dimensions for PCB design

Hole diameter	1.3 mm
Pin spacing	5 mm

Packaging information

Type of packaging	packed in cardboard
Pieces per package	250
Denomination packing units	Pcs.

General product information

Type of note	Note on application
Note	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).

Processing notes

Process	Wave soldering
Specification	Following IEC 61760-1:2006-04
	Following IEC 60068-2-54:2006-04

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C

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Technical data

Termination and connection method

Pull-out test

Pull-out test	IEC 60998-2-1:1990-04
	Test passed
Conductor cross section / conductor type / tensile force	0.14 mm² / solid / > 10 N
	0.14 mm² / flexible / > 10 N
	2.5 mm² / solid / > 50 N
	1.5 mm² / flexible / > 40 N

Mechanical tests according to standard

Test specification	IEC 60998-2-1 (in parts)

Electrical tests

Rated current	17.5 A
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV

Air clearances and creepage distances

Insulating material group	I
Comparative tracking index (IEC 60112:2003-01)	CTI 600
Voltage	250 V
Rated insulation voltage (III/3)	250 V
Rated insulation voltage (III/2)	400 V
Rated insulation voltage (II/2)	630 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV
Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	3.2 mm
Minimum creepage distance value (III/2)	3 mm
Minimum creepage distance value (II/2)	3.2 mm
Note on connection cross section	With connected conductor 2.5 mm² (solid).

Current carrying capacity / derating curves

Specification	IEC 60998-2-1 (in parts)

Vibration test

Resistance to ageing, to humidity conditions, to ingress of solid objects and to harmful ingress of water	Test passed IEC 60998-2-1:1990-04 168 h/100°C 48 h/30 °C/92 %

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Technical data

Vibration test

Test result	Test passed
Test specification	IEC 60998-2-1:1990-04
Dry heat	168 h/100°C
Humid heat	48 h/30 °C/92 %

Resistance to ageing, humidity and penetration of solids

Test result	Test passed
Test specification	IEC 60998-2-1:1990-04
Dry heat	168 h/100°C
Humid heat	48 h/30 °C/92 %

Standards and Regulations

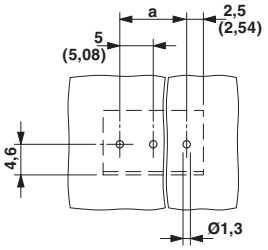
Connection in acc. with standard	EN-VDE
	CSA
Flammability rating according to UL 94	V0

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

Drilling diagram



Dimensional drawing

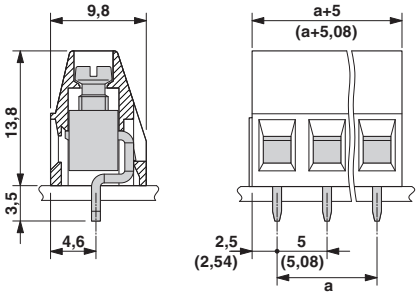


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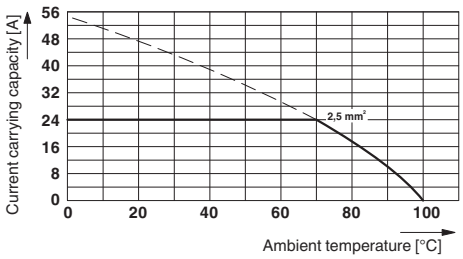
Diagram



Type: MKDS 1,5/2 and MKDS 1,5/3
Test as per DIN EN 60512-5-2:2003-01
Reduction factor = 1
No. of positions: 5

Classifications

eCl@ss

eCl@ss 4.0	27141109
eCl@ss 4.1	27141109
eCl@ss 5.0	27141190
eCl@ss 5.1	27261100
eCl@ss 6.0	27261100
eCl@ss 7.0	27440401
eCl@ss 8.0	27440401
eCl@ss 9.0	27440401

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002643
ETIM 5.0	EC002643
ETIM 6.0	EC002643

UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	39121432
UNSPSC 12.01	39121432
UNSPSC 13.2	39121432

Approvals

Approvals

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Approvals

Approvals

CSA / SEV / CCA / EAC / cULus Recognized / DNV GL / IECEE CB Scheme

Ex Approvals

Approval details

CSA		http://www.csagroup.org/services-industries/product-listing/	13631

	D	B
Nominal voltage UN	300 V	300 V
Nominal current IN	10 A	10 A
mm²/AWG/kcmil	28-14	28-14

SEV		https://www.electrosuisse.ch/en/meta/shop/product-certificates.html	IK-4199

Nominal voltage UN	250 V
Nominal current IN	24 A
mm²/AWG/kcmil	2.5

CCA	IK-3249

Nominal voltage UN	250 V
mm²/AWG/kcmil	2.5

EAC		B.01742

cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19770427

	D	B
Nominal voltage UN	300 V	300 V

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Approvals

	D	B
Nominal current IN	10 A	15 A
mm²/AWG/kcmil	30-14	30-14

DNV GL	http://exchange.dnv.com/tari/	TAE00001EV

IECEE CB Scheme	CB scheme	http://www.iecee.org/	CH-8225

Nominal voltage UN	250 V
Nominal current IN	24 A
mm²/AWG/kcmil	2.5

Accessories

Accessories

Bridge

Insertion bridge - EBP 2- 5 - 1733169

Insertion bridge, fully insulated, for connectors with 5.0 or 5.08 mm pitch, no. of positions: 2

Labeled terminal marker

Marker card - SK 5/3,8:FORTL.ZAHLEN - 0804183

Marker card, Card, white, labeled, Horizontal: consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - (99)100, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

Pitch spacer

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Accessories

Pitch spacer - RZ 1,25-MKDS 1,5 - 1702048

Pitch spacer, for adjusting the pitches between MKDS and GMKDS terminal blocks in mixed rows, 1.25 mm thick

Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 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