PCB terminal block - MKDS 1/ 2-3,5 BK H0L - 1716933

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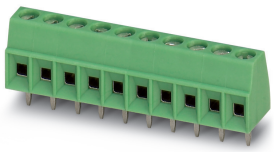
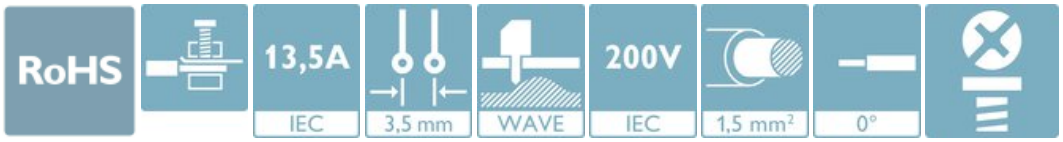


The figure shows a 10-position version of the product

PCB terminal block, nominal current: 13.5 A, rated voltage (III/2): 200 V, nominal cross section: 1.5 mm², number of potentials: 2, Number of rows: 1, Number of positions per row: 2, product range: MKDS 1, pitch: 3.5 mm, connection method: Screw connection with tension sleeve, screw head form: H0L Philipps recess with slotted Torx, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: black, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, 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



Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	4 046356 136495
GTIN	4046356136495
Weight per Piece (excluding packing)	3.330 g
Custom tariff number	85369010
Country of origin	Germany

Technical data

Item properties

Brief article description	PCB terminal block
Range of articles	MKDS 1
Pitch	3.5 mm

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Technical data

Item properties

Number of positions	2
Drive form screw head	Philipps recess with slotted Torx (H0L)
Screw thread	M2
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	1
Number of connections	2
Number of potentials	2

Electrical parameters

Nominal current	13.5 A
Nom. voltage	200 V
Rated voltage (III/3)	160 V
Rated voltage (III/2)	200 V
Rated voltage (II/2)	400 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

Connection capacity

Connection method	Screw connection with tension sleeve
pluggable	no
Conductor cross section solid	0.14 mm² ... 1.5 mm²
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section AWG / kcmil	26 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 0.5 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 0.5 mm²
2 conductors with same cross section, solid	0.14 mm² ... 0.5 mm²
2 conductors with same cross section, flexible	0.14 mm² ... 0.34 mm²
Cylindrical gauge a x b / diameter	- / 1.6 mm
Stripping length	5 mm
Torque	0.22 Nm ... 0.25 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 (5 - 7 µm Sn)

PCB terminal block - MKDS 1/ 2-3,5 BK H0L - 1716933

Technical data

Material data - contact

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	black (9005)
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 for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	7.3 mm
Width [w]	7.5 mm
Height [h]	12 mm
Pitch	3.5 mm
Height (without solder pin)	8.5 mm
Solder pin [P]	3.5 mm
Pin dimensions	0.5 x 0.9 mm

Dimensions for PCB design

Hole diameter	1.1 mm

Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
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).

Ambient conditions

PCB terminal block - MKDS 1/ 2-3,5 BK H0L - 1716933

Technical data

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)

Termination and connection method

Test for conductor damage and slackening	IEC 60998-2-1:2002-12
	Test passed

Pull-out test

Pull-out test	IEC 60998-2-1:2002-12
Conductor cross section / conductor type / tensile force	0.14 mm² / solid / > 10 N
	0.14 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N

Mechanical tests according to standard

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

Electrical tests

Rated current	13.5 A
Conductor cross section	1.5 mm²
Rated voltage (III/2)	200 V
Rated surge voltage (III/2)	2.5 kV

Air clearances and creepage distances

Clearances and creepage distances	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	2 mm
Minimum creepage distance value (III/2)	1.5 mm
Minimum creepage distance value (II/2)	2 mm
Note on connection cross section	With connected conductor 1.5 mm² (stranded).

Temperature-rise test

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

Current carrying capacity / derating curves

Caption	Type: MKDS 1/5-3,5

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Technical data

Current carrying capacity / derating curves

	Test following DIN EN 60512-5-2:2003-01 Reduction factor = 1 No. of positions = 5

Vibration test

Specification	IEC 60068-2-6:1995-03
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

Insulation resistance

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

Glow-wire test

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

Mechanical strength/tumbling barrel test

Specification	IEC 60998-1:2002-12
Number of drop cycles	50

Test finger safety

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

Standards and Regulations

Connection in acc. with standard	EN-VDE
	CSA

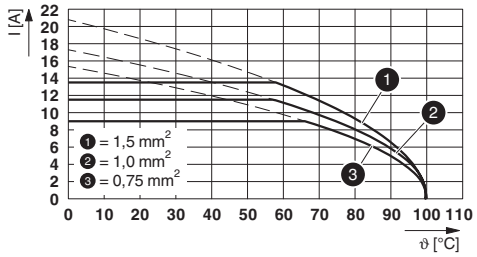
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

PCB terminal block - MKDS 1/ 2-3,5 BK H0L - 1716933

Diagram



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

Classifications

eCl@ss

eCl@ss 10.0.1	27440401
eCl@ss 11.0	27460101
eCl@ss 4.0	27141100
eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27261100
eCl@ss 6.0	27261100
eCl@ss 7.0	27440401
eCl@ss 9.0	27440401

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002643
ETIM 6.0	EC002643
ETIM 7.0	EC002643

UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	39121432
UNSPSC 12.01	39121432
UNSPSC 13.2	39121432
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432

PCB terminal block - MKDS 1/ 2-3,5 BK H0L - 1716933

Classifications

UNSPSC

UNSPSC 21.0	39121432

Approvals

Approvals

Approvals

IECEE CB Scheme / SEV / EAC / cULus Recognized

Ex Approvals

Approval details

IECEE CB Scheme		http://www.iecee.org/	CH-10787

Nominal voltage UN	160 V
Nominal current IN	12 A
mm²/AWG/kcmil	1.5

SEV		https://www.eurofins.ch/de/	IK-4497

Nominal voltage UN	160 V
Nominal current IN	12 A
mm²/AWG/kcmil	1.5

EAC		B.01687

PCB terminal block - MKDS 1/ 2-3,5 BK H0L - 1716933

Approvals

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

	B	D
Nominal voltage UN	300 V	300 V
Nominal current IN	10 A	10 A
mm²/AWG/kcmil	30-16	30-16

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