

# PCB terminal block - MKDS 10 HV/ 1-F-10,16 - 1993763

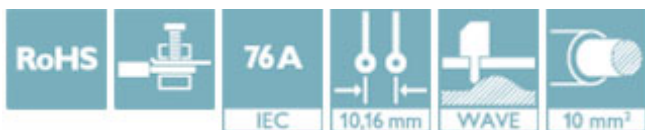
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PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, Nominal cross section: 10 mm<sup>2</sup>, pitch: 10.16 mm, number of positions: 1, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear front pinning, Solder pin [P]: 5 mm

## Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- ✓ Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve



## Key Commercial Data

Packing unit	50 pc
GTIN	 4 046356 037600
GTIN	4046356037600

## Technical data

### Item properties

Brief article description	PCB terminal block
Range of articles	MKDS 10 HV
Pitch	10.16 mm
Number of positions	1
Connection method	Screw connection with tension sleeve
Screw thread	M4
Mounting type	Wave soldering
Pin layout	Linear front pinning
Number of levels	1
Number of connections	1
Number of potentials	1

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## Technical data

### Electrical parameters

Nom. voltage	1000 V
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### Connection capacity

Connection method	Screw connection with tension sleeve
Conductor cross section solid	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section AWG / kcmil	20 ... 6
Conductor cross section flexible, with ferrule without plastic sleeve	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with same cross section, solid	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with same cross section, stranded, ferrules without plastic sleeve	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Stripping length	10 mm
Torque	1.2 Nm ... 1.5 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)
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

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	Schematic representation – for additional information, see product range drawing in the Download Center
Length [ l ]	18.7 mm
Width [ w ]	10.16 mm
Height [ h ]	35.8 mm
Pitch	10.16 mm

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## Technical data

### Dimensions for the product

Height (without solder pin)	30.8 mm
Solder pin [P]	5 mm
Pin dimensions	1 x 0.9 mm

### Dimensions for PCB design

Hole diameter	1.5 mm
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### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

### 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

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

### Pull-out test

Pull-out test	IEC 60998-2-1:2002-12
	Test passed
Conductor cross section / conductor type / tensile force	0.5 mm <sup>2</sup> / solid / flexible / > 20 N
	10 mm <sup>2</sup> / flexible / > 90 N
	16 mm <sup>2</sup> / solid / > 100 N

### Electrical tests

Rated current	76 A
Conductor cross section	16 mm <sup>2</sup>
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Rated insulation voltage (III/3)	800 V
Rated insulation voltage (III/2)	1000 V
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (III/3)	8 kV
Rated surge voltage (III/2)	8 kV

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## Technical data

### Air clearances and creepage distances

Rated surge voltage (II/2)	8 kV
Minimum clearance - inhomogeneous field (III/3)	8 mm
Minimum clearance - inhomogeneous field (III/2)	8 mm
Minimum clearance - inhomogeneous field (II/2)	8 mm
Minimum creepage distance value (III/3)	10 mm
Minimum creepage distance value (III/2)	8 mm
Minimum creepage distance value (II/2)	10 mm

### Current carrying capacity / derating curves

### Vibration test

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

### Resistance to ageing, humidity and penetration of solids

Dry heat	168 h/100°C
Humid heat	48 h/30 °C/92 %

### Standards and Regulations

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

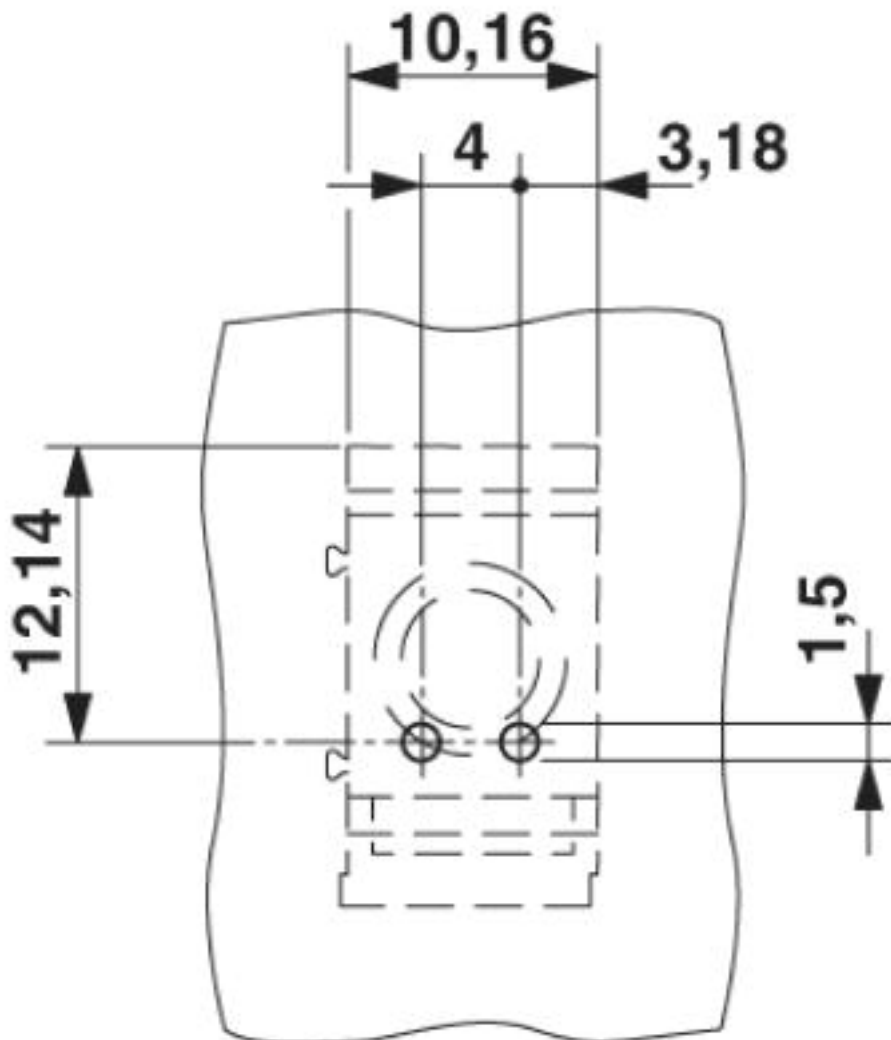
### Environmental Product Compliance

	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

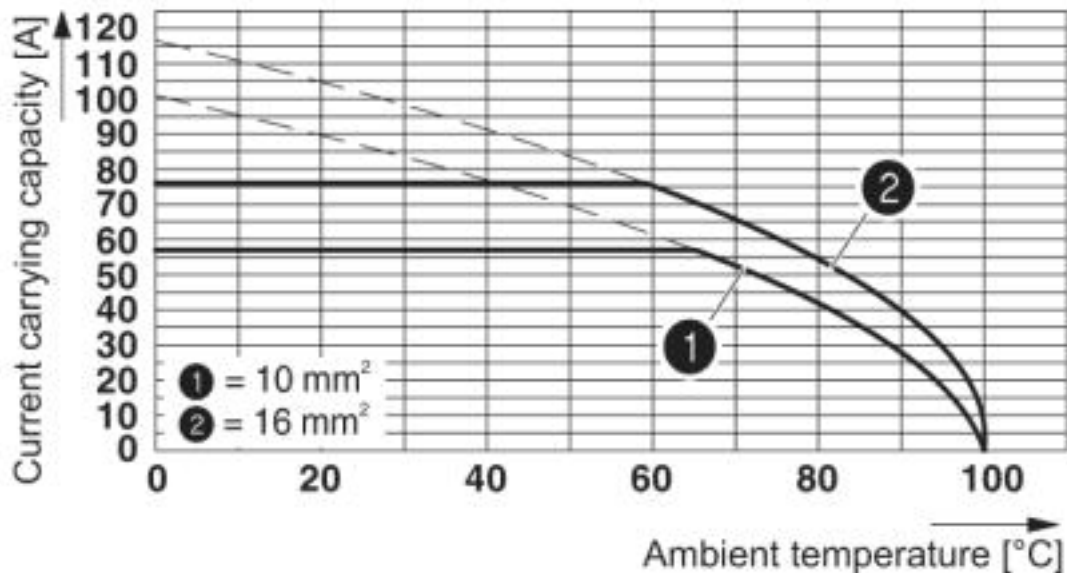
# PCB terminal block - MKDS 10 HV/ 1-F-10,16 - 1993763

Drilling diagram

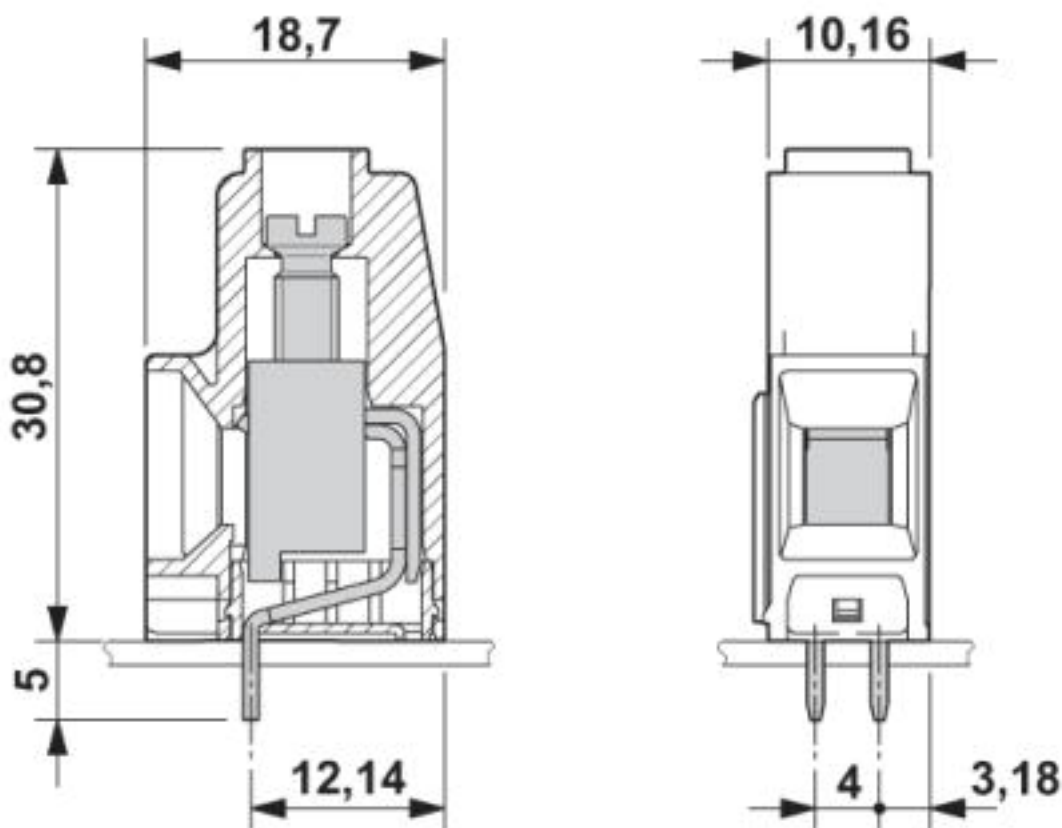


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Diagram



Dimensional drawing



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## Approvals

### Approvals

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#### Approvals


SEV / EAC / cULus Recognized / IECEE CB Scheme

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#### Ex Approvals


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### Approval details

SEV		<a href="https://www.electrosuisse.ch/de/meta/shop/produktezertifikate.html">https://www.electrosuisse.ch/de/meta/shop/produktezertifikate.html</a>	IK-4486
Nominal voltage UN		400 V	
Nominal current IN		76 A	
mm <sup>2</sup> /AWG/kcmil		10	

EAC		B.01742
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-19770427
	B	C	D
Nominal voltage UN	300 V	150 V	300 V
Nominal current IN	60 A	60 A	10 A
mm <sup>2</sup> /AWG/kcmil	20-6	20-6	20-6

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	CH-10724
Nominal voltage UN		400 V	
Nominal current IN		76 A	
mm <sup>2</sup> /AWG/kcmil		10	

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