

## PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



PCB terminal block, nominal current: 76 A, pitch: 10.16 mm, number of positions: 2, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green

### 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	1 pc
Minimum order quantity	50 pc
GTIN	 4 046356 073769
GTIN	4046356073769
Weight per Piece (excluding packing)	16.840 g
Custom tariff number	85369010
Country of origin	China

### Technical data

#### Item properties

Brief article description	PCB terminal block
Range of articles	MKDS 10 HV
Pitch	10.16 mm
Number of positions	2

# PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

## Technical data

### Item properties

Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M4
Mounting type	Wave soldering
Pin layout	Zigzag pinning W
Number of levels	1
Number of connections	2
Number of potentials	2

### Connection capacity

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

# PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

## 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 ]	18.7 mm
Width [ w ]	20.32 mm
Height [ h ]	35.8 mm
Pitch	10.16 mm
Height (without solder pin)	30.8 mm
Solder pin [P]	5 mm
Pin dimensions	1 x 0.9 mm
Dimension a	10.16 mm

### Dimensions for PCB design

Hole diameter	1.5 mm
---------------	--------

### Packaging information

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

### 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 ... 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
---------------	-----------------------

# PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

## Technical data

### Pull-out test

	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

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
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

## PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

### Technical data

#### Standards and Regulations

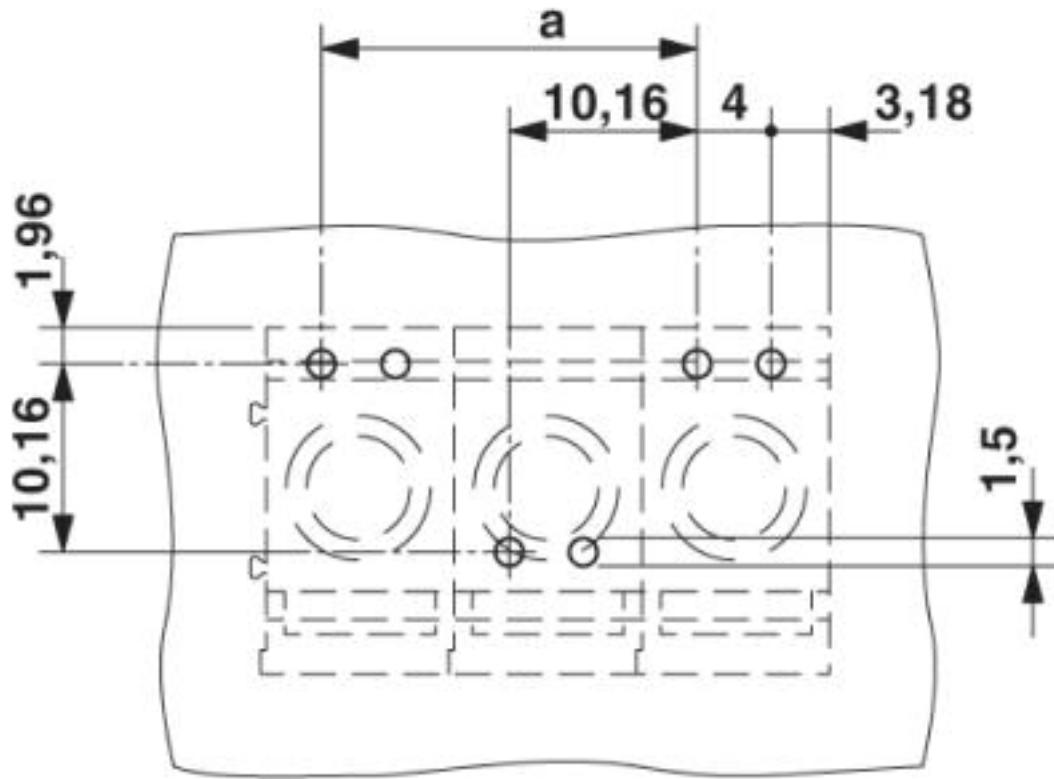
Connection in acc. with standard	EN-VDE
	CUL
Flammability rating according to UL 94	V0

#### 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"

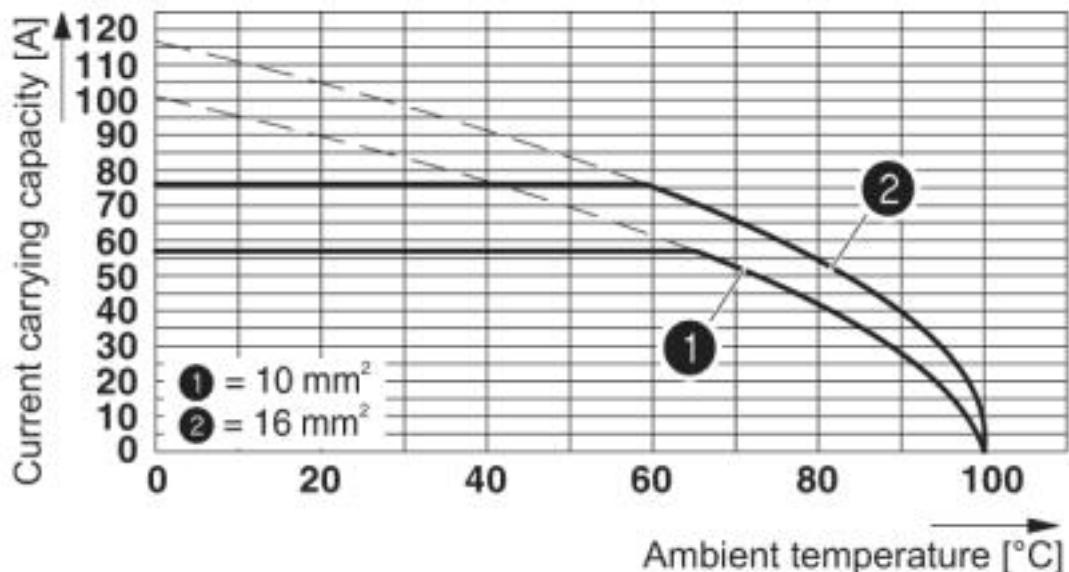
### Drawings

Drilling diagram

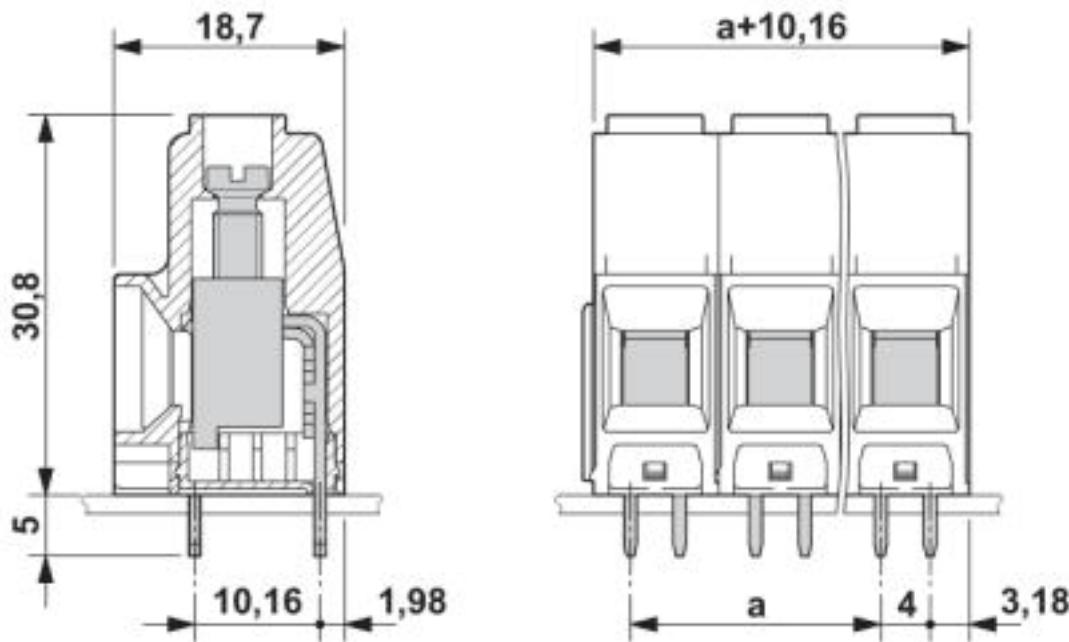


## PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

Diagram



Dimensional drawing



The figure shows the dimensional drawing of the 3-pos. version of the product

## PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

### Classifications

eCl@ss

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 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
ETIM 7.0	EC002643

### UNSPSC

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

### Approvals

#### Approvals

---

#### Approvals

IECEE CB Scheme / SEV / EAC / cULus Recognized

---

#### Ex Approvals

---

#### Approval details

## PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

### Approvals

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	CH-8225
Nominal voltage UN		800 V	
Nominal current IN		76 A	
mm <sup>2</sup> /AWG/kcmil		10	

SEV		<a href="https://www.electrosuisse.ch/de/meta/shop/produktezertifikate.html">https://www.electrosuisse.ch/de/meta/shop/produktezertifikate.html</a>	IK-3542-M1
Nominal voltage UN		800 V	
Nominal current IN		76 A	
mm <sup>2</sup> /AWG/kcmil		10	

EAC			B.01742
-----	---	--	---------

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	
Nominal voltage UN	600 V	600 V	
Nominal current IN	60 A	60 A	
mm <sup>2</sup> /AWG/kcmil	20-6	20-6	

### Accessories

#### Accessories

#### Crimping tool

Crimping pliers - CRIMPFOX 6 - 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 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

## PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

### Accessories

---

Crimping pliers - CRIMPFOX 16 S - 1207983



Crimping pliers for ferrules up to 16 mm<sup>2</sup>

---

### 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

---

### Terminal marking

Marker strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5 mm, Number of individual labels: 90000