PCB terminal block - MKDS 10 HV/ 3-ZF-10,16 - 1782909

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The figure shows a 5-pos. version of the product in green

PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 10 mm², pitch: 10.16 mm, number of positions: 3, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Zigzag pinning M, 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	1
GTIN	4 046356 554855
GTIN	4046356554855
Custom tariff number	85369010

Technical data

Item properties

Brief article description	PCB terminal block
Range of articles	MKDS 10 HV
Pitch	10.16 mm
Number of positions	3
Connection method	Screw connection with tension sleeve
Screw thread	M4

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Technical data

Item properties

Mounting type	Wave soldering
Pin layout	Zigzag pinning M
Number of levels	1
Number of connections	3
Number of potentials	3

Electrical parameters

Nominal current	76 A
Nom. voltage	1000 V
Rated voltage	800 V
Rated voltage (III/2)	1000 V
Rated 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

Connection capacity

Connection method	Screw connection with tension sleeve
Conductor cross section solid	0.5 mm² ... 16 mm²
Conductor cross section flexible	0.5 mm² ... 16 mm²
Conductor cross section AWG / kcmil	20 ... 6
Conductor cross section flexible, with ferrule without plastic sleeve	0.5 mm² ... 16 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.5 mm² ... 16 mm²
2 conductors with same cross section, solid	0.5 mm² ... 6 mm²
2 conductors with same cross section, flexible	0.5 mm² ... 6 mm²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.5 mm² ... 4 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² ... 6 mm²
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)

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Material data - contact

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 for the product

Caption	Schematic representation – for additional information, see product range drawing in the Download Center
Length [l]	18.7 mm
Width [w]	30.48 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

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.

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

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Technical data

Termination and connection method

	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 mm² / solid / flexible / > 20 N
	10 mm² / flexible / > 90 N
	16 mm² / solid / > 100 N

Mechanical tests according to standard

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

Electrical tests

Rated current	76 A
Conductor cross section	16 mm²
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
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

Temperature-rise test

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

Current carrying capacity / derating curves

Specification	IEC 60998-2-1 (in parts)

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)

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Vibration test

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

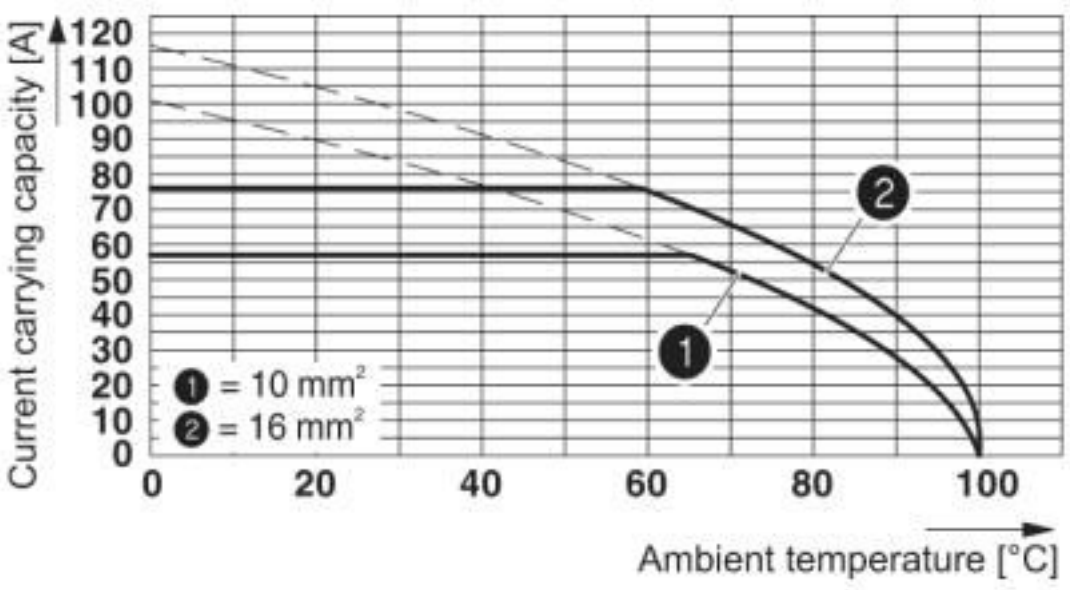
Connection in acc. with standard	EN-VDE

Environmental Product Compliance

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

Drawings

Diagram



Type: MKDS 10 HV/...-ZB-10,16
Tested in accordance with DIN EN 60512-5-2:2003-01
Reduction factor = 1
No. of positions = 5

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Classifications

eCl@ss

eCl@ss 10.0.1	27440401
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
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
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

Approvals

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SEV / EAC / cULus Recognized / IECEE CB Scheme

Ex Approvals

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Approvals

Approval details

SEV  https://www.eurofins.ch/de/ IK-4486-A1

Nominal voltage UN	800 V
Nominal current IN	76 A
mm²/AWG/kcmil	10

EAC  B.01687

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

	B	C
Nominal voltage UN	600 V	600 V
Nominal current IN	60 A	60 A
mm²/AWG/kcmil	20-6	20-6

IECEE CB Scheme  http://www.iecee.org/ CH-10724-A1

Nominal voltage UN	800 V
Nominal current IN	76 A
mm²/AWG/kcmil	10

Accessories

Accessories

Crimping tool

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Accessories

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 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Crimping pliers - CRIMPFOX 16 S - 1207983



Crimping pliers for ferrules up to 16 mm²

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 ROLLMASTER 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

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