

PCB terminal block - MKDS 10 HV/ 4-ZB-10,16



1709704

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PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: MKDS 10 HV, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Zigzag pinning W, Solder pin [P]: 5 mm, number of solder pins per potential: 2, 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
- Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve

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Commercial Data

Order Key	1709704
Packing unit	50 pc
Minimum order quantity	50 pc
Sales Key	AAB
Product Key	AANFFA
Catalog Page	Page 453 (C-1-2013)
GTIN	4046356074186
Weight per Piece (including packing)	34 g
Weight per Piece (excluding packing)	33.568 g
Customs tariff number	85369010
Country of origin	CN

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Technical Data

Product properties

Type	PC terminal block can be aligned
Number of positions	4
Number of connections	4
Number of rows	1
Number of potentials	4
Pin layout	Zigzag pinning W

Electrical properties

Maximum load current	76 A (with 16 mm ² conductor cross section)
Rated voltage (II/2)	1000 V
Rated voltage (III/2)	1000 V
Rated surge voltage (II/2)	8 kV
Rated surge voltage (III/2)	8 kV
Rated surge voltage (III/3)	8 kV
Nominal voltage U _N	800 V
Nominal current I _N	76 A
Nominal current I _N	76 A

Connection data

Connection technology

Type	PC terminal block can be aligned
Nominal cross section	16 mm ²

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross section solid	0.5 mm ² ... 16 mm ²
Conductor cross section flexible	0.5 mm ² ... 16 mm ²
Conductor cross section AWG	20 ... 6
Conductor cross section flexible, with ferrule without plastic sleeve	0.5 mm ² ... 16 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.5 mm ² ... 16 mm ²
2 conductors with same cross section, solid	0.5 mm ² ... 6 mm ²
2 conductors with same cross section, flexible	0.5 mm ² ... 6 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.5 mm ² ... 4 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 6 mm ²
Stripping length	10 mm
Torque	1.2 Nm ... 1.5 Nm

Mounting

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Drive form screw head	Slotted (L)
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Material specifications

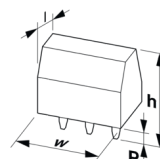
Material data - contact

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

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

Dimensional drawing	
Width	40.64 mm
Height	35.8 mm
Installed height	30.8 mm
Length of the solder pin	5 mm
Length	18.7 mm
Length of the solder pin	5 mm
Pin dimensions	1 x 0.9 mm
Hole diameter	1.5 mm
Pitch	10.16 mm

Mechanical tests

Connection test

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

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

Pull-out test

Specification	IEC 60998-2-1:2002-12
Conductor cross section/conductor type/tractive force setpoint/actual value	0.5 mm ² / solid / > 20 N
	0.5 mm ² / flexible / > 20 N
	16 mm ² / solid / > 100 N
	10 mm ² / flexible / > 90 N

Torque test

Specification	IEC 60998-2-1:2002-12
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Electrical tests

Electrical properties

Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Pollution degree	2

Temperature-rise test

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

Insulation resistance

Specification	IEC 60998-1:2002-12
Insulation resistance, neighboring positions	10 ⁹ Ω

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112:2003-01)	CTI 600
Rated insulation voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	10 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	8 kV
minimum clearance value - non-homogenous field (II/2)	8 mm
minimum creepage distance (II/2)	10 mm

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Environmental and real-life conditions

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)
Sweep speed	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

Glow-wire test

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

Ambient conditions

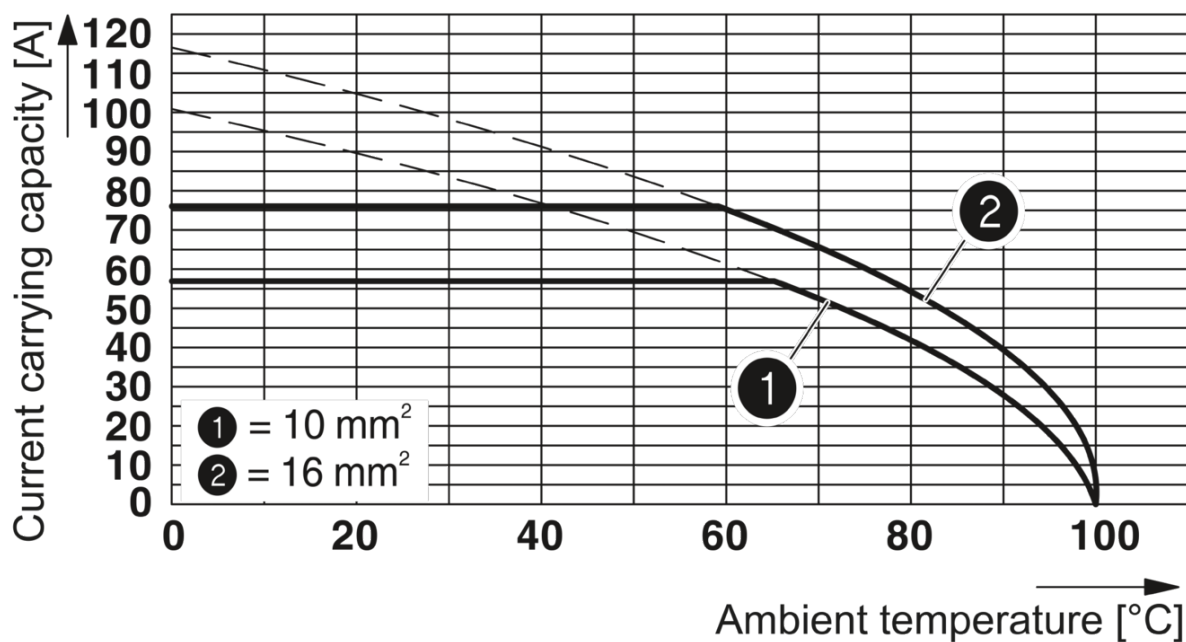
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

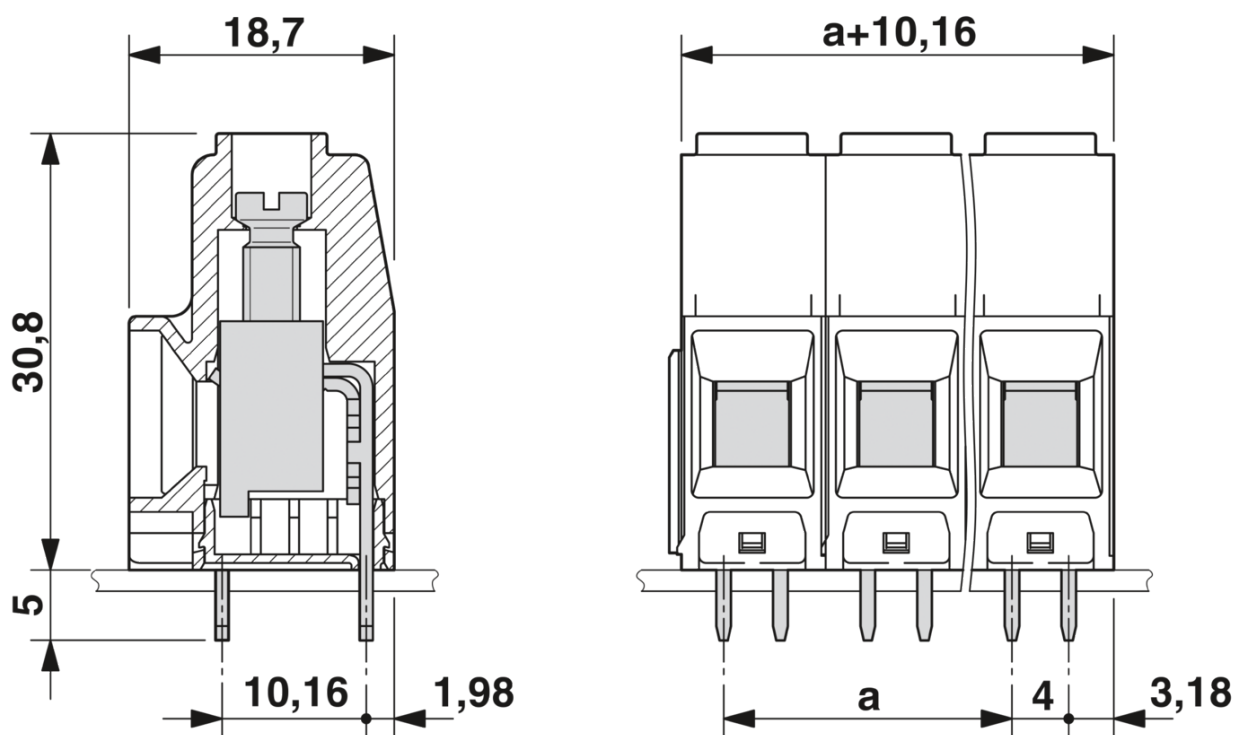
Type of packaging	packed in cardboard
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Drawings

Diagram

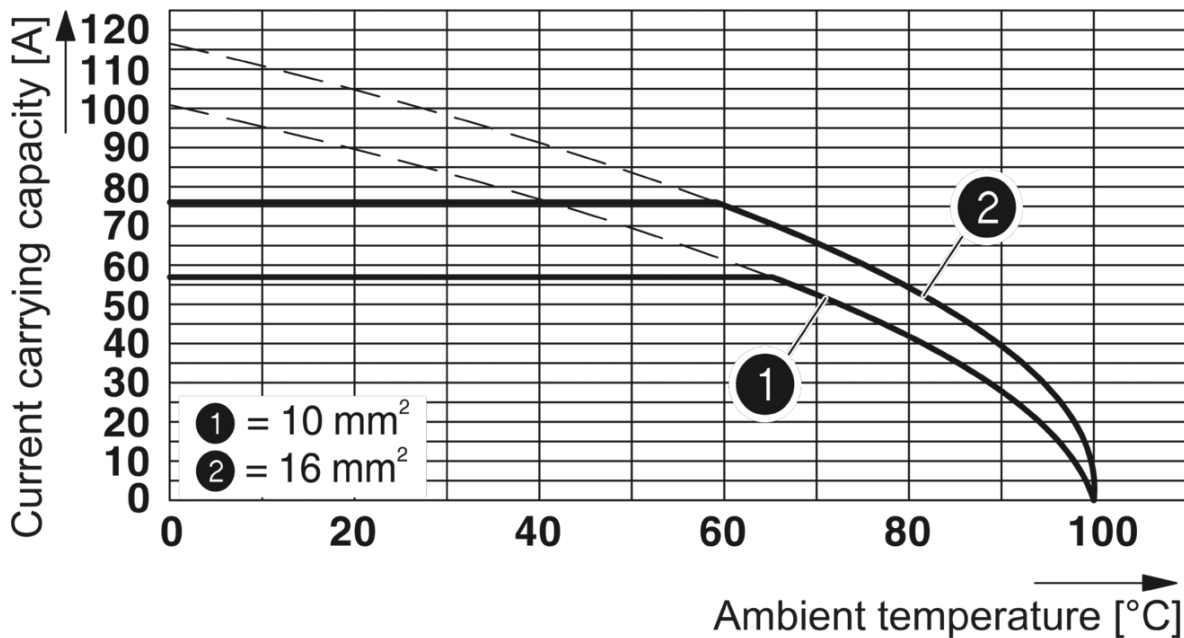


Dimensional drawing

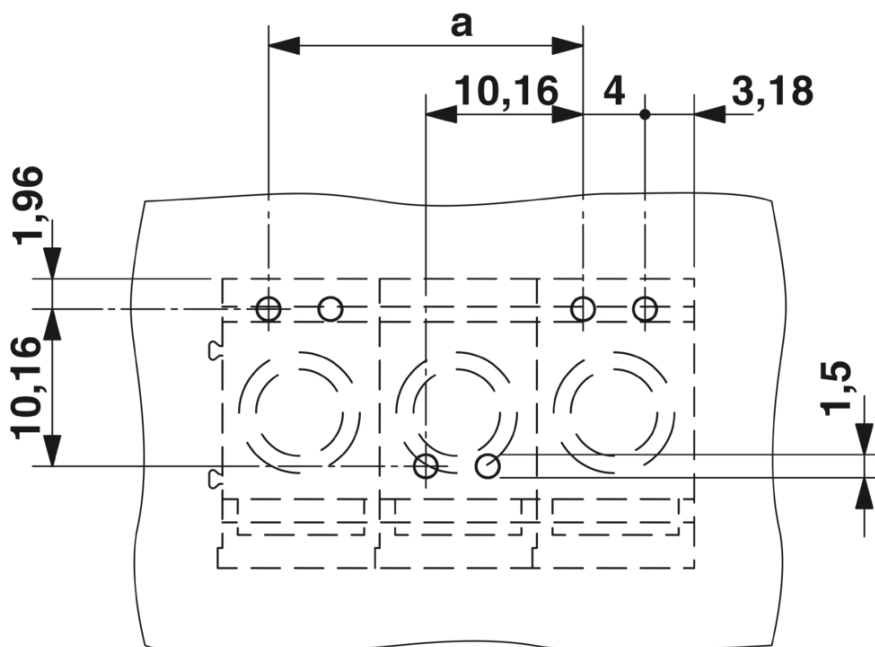


The figure shows the dimensional drawing of the 3-pos. version of the product

Diagram



Drilling plan/solder pad geometry




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Approvals

IECEE CB Scheme 	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Only flexible conductors	800 V	76 A	-	- 10
Only rigid conductors	800 V	76 A	-	- 16

EAC

cULus Recognized 	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	600 V	60 A	20 - 6	-
Use group C				
	600 V	60 A	20 - 6	-

SEV 	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Only flexible conductors	800 V	76 A	-	- 10
Only rigid conductors	800 V	76 A	-	- 16

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Classifications

ECLASS

ECLASS-9.0	27440401
ECLASS-10.0.1	27440401
ECLASS-11.0	27460101

ETIM

ETIM 6.0	EC002643
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UNSPSC

UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

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Environmental Product Compliance

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

Screwdriver

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

Marker strip

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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Crimping pliers

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

Crimping pliers - CRIMPFOX 16 S - 1207983



Crimping pliers for ferrules up to 16 mm²

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