

# PCB terminal block - MKDS 5N HV/12-ZB-6,35 - 1777642

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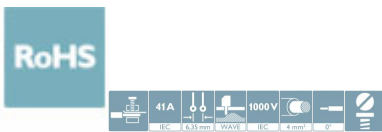


PCB terminal block, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 4 mm<sup>2</sup>, pitch: 6.35 mm, number of positions: 12, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Zigzag pinning W, Solder pin [P]: 5 mm

The figure shows the 5-pos. version

## 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



## Key Commercial Data

Packing unit	50 pc
GTIN	
GTIN	4046356522526

## Technical data

### Item properties

Brief article description	PCB terminal block
Range of articles	MKDS 5 N HV
Pitch	6.35 mm
Number of positions	12
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M3
Mounting type	Wave soldering
Pin layout	Zigzag pinning W
Number of levels	1
Number of connections	12
Number of potentials	12

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## Technical data

### Electrical parameters

Nominal current	41 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
pluggable	no
Conductor cross section solid	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 10
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Stripping length	8 mm
Torque	0.5 Nm ... 0.6 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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (5 - 7 µm Sn)
Metal surface soldering area (top layer)	Tin (5 - 7 µm Sn)

### 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

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## Technical data

### Dimensions for the product

Length [ l ]	15.85 mm
Width [ w ]	76.2 mm
Height [ h ]	27 mm
Pitch	6.35 mm
Height (without solder pin)	27 mm
Solder pin [P]	5 mm
Pin spacing	9 mm
Pin dimensions	0.9 x 0.9 mm

### Dimensions for PCB design

Hole diameter	1.3 mm
Pin spacing	9 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

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
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N
	4 mm <sup>2</sup> / flexible / > 60 N
	6 mm <sup>2</sup> / solid / > 80 N

### Mechanical tests according to standard

Test specification	IEC 60998-2-1 (in parts)
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### Electrical tests

Rated current	41 A
Conductor cross section	4 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 60947-7-4:2013-08
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## Technical data

### Air clearances and creepage distances

Specification	IEC 60947-7-4:2013-08
Minimum clearance - inhomogeneous field (III/3)	8 mm
Minimum clearance - inhomogeneous field (III/2)	8 mm
Minimum clearance - inhomogeneous field (II/2)	5.5 mm
Minimum creepage distance value (III/3)	10 mm
Minimum creepage distance value (III/2)	8 mm
Minimum creepage distance value (II/2)	5.5 mm

### Temperature-rise test

Specification	IEC 60998-1:2002-12
Result	Test passed
Requirement temperature-rise test	Increase in temperature $\leq 45$ K

### Current carrying capacity / derating curves

Caption	Type: MKDS 5N HV/...-ZB-6,35 Tested in accordance with DIN EN 60512-5-2:2003-01 Reduction factor = 1 Number of positions: 5
Specification	Following IEC 60512-5-2:2002-02
Number of positions	5
Reduction factor	1

### 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 %

### Insulation resistance

Specification	IEC 60998-1:2002-12
Result	Test passed
Insulation resistance, neighboring positions	$10^{12} \Omega$

### Glow-wire test

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

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## Technical data

### Mechanical strength/tumbling barrel test

Specification	IEC 60998-1:2002-12
Height of fall	50 cm
Number of drop cycles	50
Rotation speed	5 rpm

### Standards and Regulations

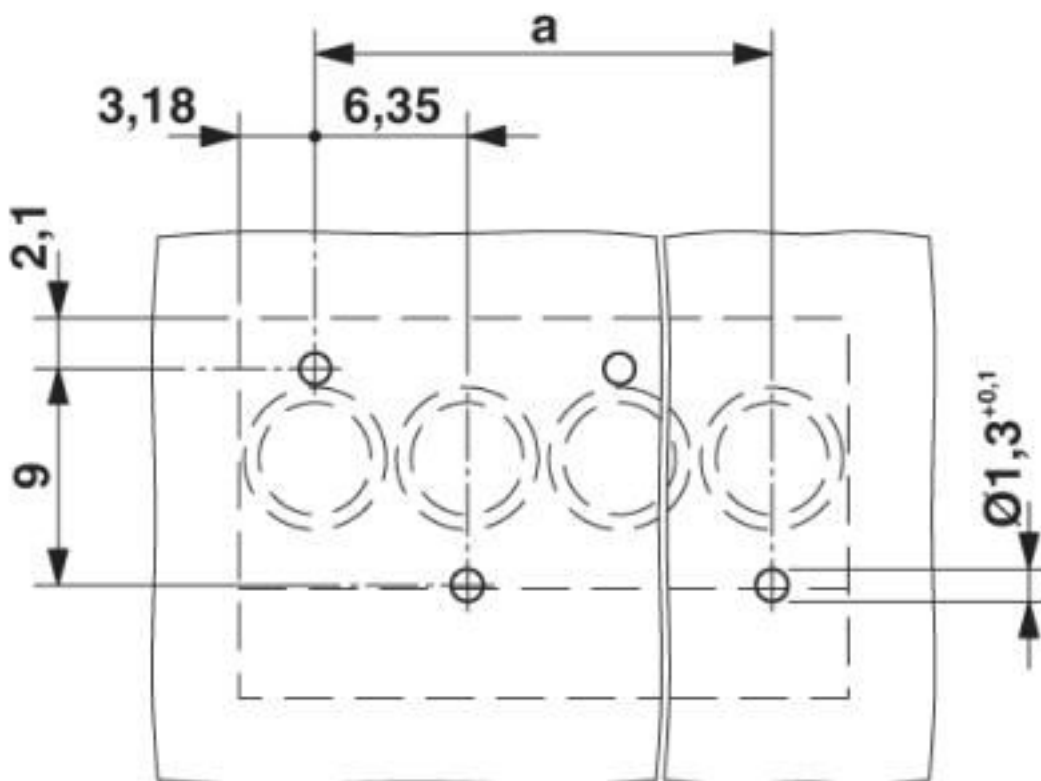
Connection in acc. with standard	EN-VDE
	CUL
Flammability rating according to UL 94	V0

### 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"

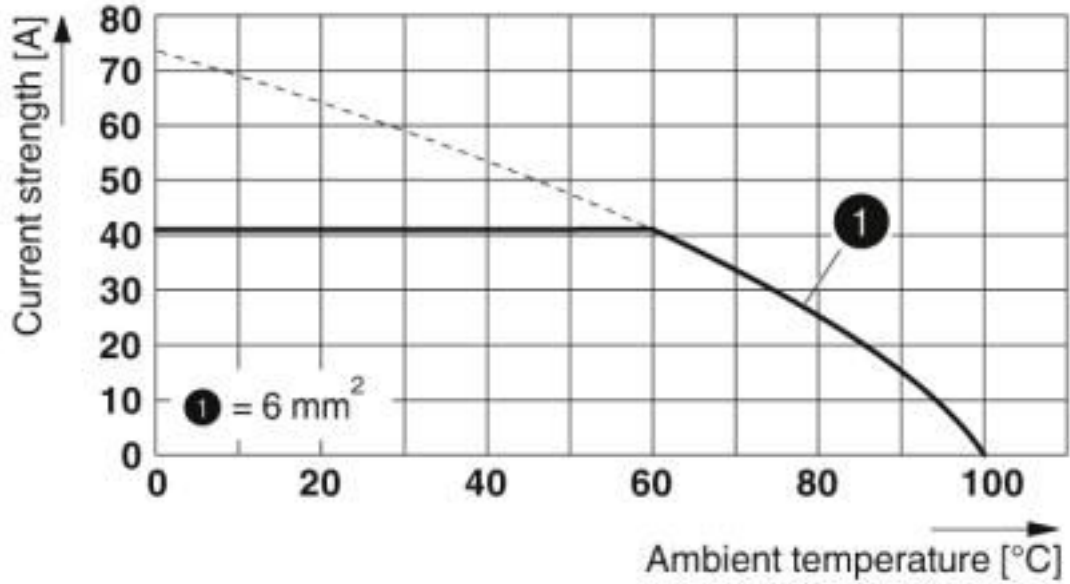
## Drawings

Drilling diagram



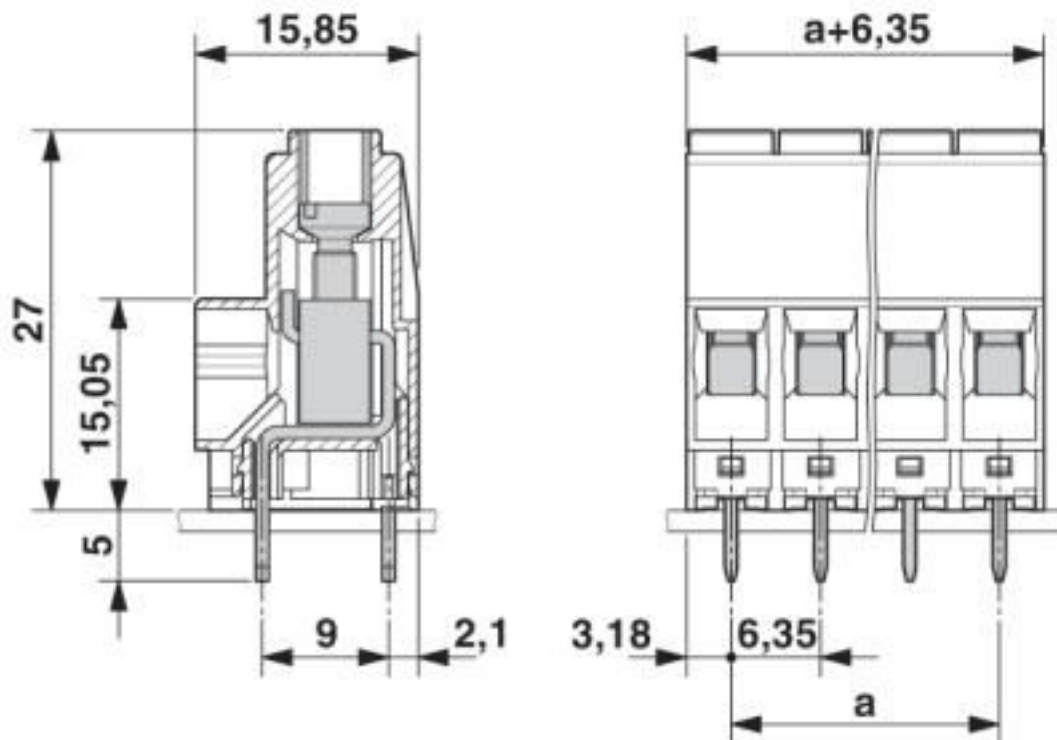
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Diagram



Type: MKDS 5N HV/...-ZB-6,35  
Tested in accordance with DIN EN 60512-5-2:2003-01  
Reduction factor = 1  
Number of positions: 5

Dimensional drawing



# PCB terminal block - MKDS 5N HV/12-ZB-6,35 - 1777642

## Classifications

### eCl@ss

eCl@ss 10.0.1	27440401
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
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

## 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

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## Approvals

SEV		<a href="https://www.eurofins.ch/de/">https://www.eurofins.ch/de/</a>	IK-4497
Nominal voltage UN		1000 V	
Nominal current IN		32 A	
mm <sup>2</sup> /AWG/kcmil		4	

EAC		B.01687
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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	
Nominal voltage UN	600 V	600 V	
Nominal current IN	30 A	30 A	
mm <sup>2</sup> /AWG/kcmil	30-10	30-10	

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	CH-10787
Nominal voltage UN		1000 V	
Nominal current IN		32 A	
mm <sup>2</sup> /AWG/kcmil		4	

## Accessories

### Accessories

#### Labeled terminal marker

Marker card - SK 6,2/3,8:FORTL.ZAHLEN - 0804374



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 6.2 mm, lettering field size: 6.2 x 3.8 mm



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### Accessories

Marker card - SK 3,8 REEL P6,2 WH CUS - 0825126



Marker card, Card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 6.2 mm, lettering field size: continuous x 3.8#mm

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### 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

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Screwdriver - SZS 0,8X4,0 VDE - 1212508



Screwdriver, slot-headed, VDE insulated, size: 0.8 x 4.0 x 100 mm, 2-component grip, with non-slip grip

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### 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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