

# PCB terminal block - MKDSO 2,5/ 3-L - 1707221

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PCB terminal block, nominal current: 24 A, rated voltage (III/2): 400 V, nominal cross section: 2.5 mm<sup>2</sup>, pitch: 5 mm, number of positions: 3, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm. Article with lateral pin exit

## Your advantages

- ✓ PCB terminal block for ME/ME MAX electronics housing
- ✓ PCB terminal block orthogonal to the PCB
- ✓ 5 mm pitch
- ✓ PCB terminal block for series ME MAX and ME electronic housings
- ✓ Maintenance-free and vibration-resistant, thanks to the Reakdyn principle or spring-loaded elements
- ✓ PCB terminal block is orthogonal to the PCB
- ✓ Internationally recognized and proven screw connection



## Key Commercial Data

Packing unit	250 pc
GTIN	
GTIN	4017918136819

## Technical data

### Item properties

Brief article description	PCB terminal block
Range of articles	MKDSO 2,5/..-L
Pitch	5 mm
Number of positions	3
Connection method	Screw connection with tension sleeve
Screw thread	M3
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	1

# PCB terminal block - MKDSO 2,5/ 3-L - 1707221

## Technical data

### Electrical parameters

Nominal current	24 A
Nom. voltage	400 V
Rated voltage	250 V
Rated voltage (III/2)	400 V
Rated voltage (II/2)	630 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV

### Connection capacity

Connection method	Screw connection with tension sleeve
Conductor cross section solid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	26 ... 14
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, solid	0.14 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.14 mm <sup>2</sup> ... 0.75 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> ... 1.5 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	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

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## Technical data

### Material data - housing

Temperature for the ball pressure test according to EN 60695-10-2	125 °C
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### Dimensions for the product

Length [ L ]	15.3 mm
Pitch	5 mm
Height (without solder pin)	18 mm
Solder pin [P]	3.5 mm
Pin dimensions	1.1 x 0.8 mm

### Dimensions for PCB design

Hole diameter	1.4 mm
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### Packaging information

Pieces per package	250
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 ... 105 °C (Depending on the current carrying capacity/derating curve)

### Termination and connection method

Test for conductor damage and slackening	IEC 60998-2-1:1990-04
	Test passed

### Pull-out test

Pull-out test	IEC 60998-2-1:1990-04
	Test passed
Conductor cross section / conductor type / tensile force	0.14 mm <sup>2</sup> / solid / > 10 N
	0.14 mm <sup>2</sup> / flexible / > 10 N
	2.5 mm <sup>2</sup> / solid / > 50 N
	2.5 mm <sup>2</sup> / flexible / > 50 N

### Mechanical tests according to standard

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

Rated current	24 A
Conductor cross section	2.5 mm <sup>2</sup>
Rated voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04

# PCB terminal block - MKDSO 2,5/ 3-L - 1707221

## Technical data

### Air clearances and creepage distances

Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	3.2 mm
Minimum creepage distance value (III/2)	2 mm
Minimum creepage distance value (II/2)	3.2 mm

### Temperature-rise test

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Requirement temperature-rise test	Increase in temperature $\leq 45$ K

### Current carrying capacity / derating curves

Caption	Type: MKDSO 2,5/4...L(R) Test based on DIN EN 60512-5-2:2003-01 Reduction factor = 1 Number of positions: 4
Specification	Following IEC 60512-5-2:2002-02
Number of positions	4
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 60998-2-1:1990-04
Result	Test passed
Insulation resistance, neighboring positions	$10^9 \Omega$

### Glow-wire test

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

### Mechanical strength/tumbling barrel test

## PCB terminal block - MKDSO 2,5/ 3-L - 1707221

### Technical data

#### Mechanical strength/tumbling barrel test

Specification	IEC 60998-2-1:1990-04
Height of fall	50 cm
Number of drop cycles	50

#### Standards and Regulations

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

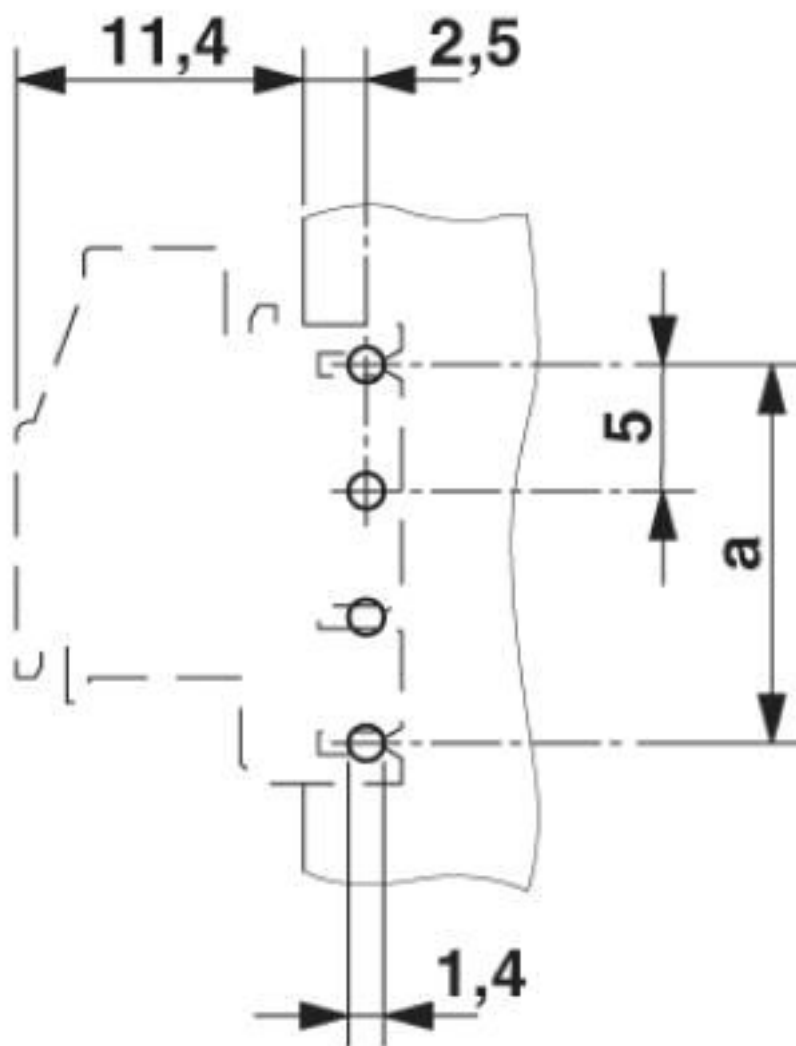
#### Environmental Product Compliance

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

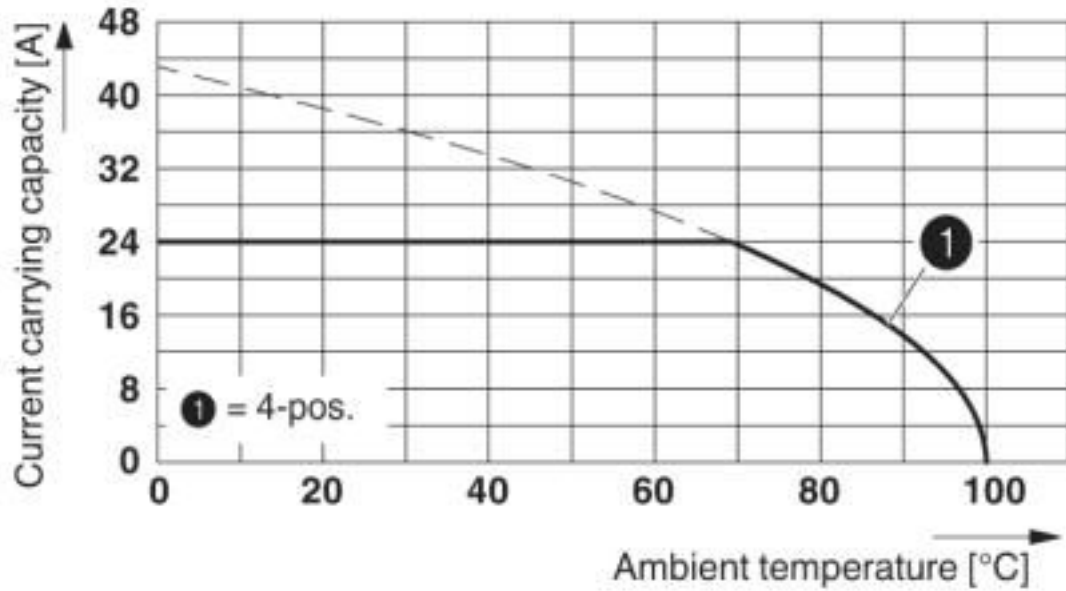
# PCB terminal block - MKDSO 2,5/ 3-L - 1707221

Drilling diagram



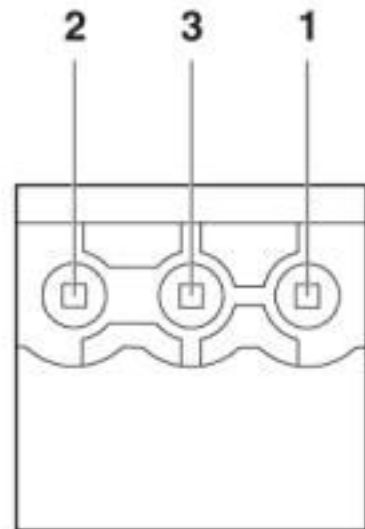
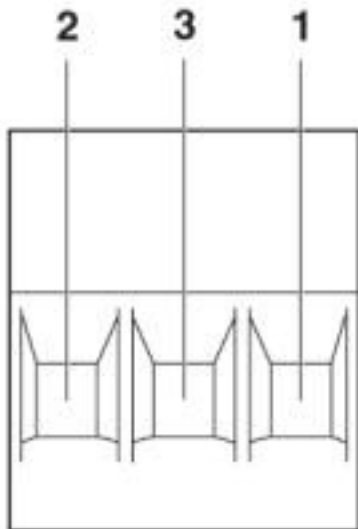
# PCB terminal block - MKDSO 2,5/ 3-L - 1707221

Diagram



Type: MKDSO 2,5/4...L(R)  
Test based on DIN EN 60512-5-2:2003-01  
Reduction factor = 1  
Number of positions: 4

Schematic diagram



Pin assignment left

## Classifications

eCl@ss

eCl@ss 10.0.1	27440401
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# PCB terminal block - MKDSO 2,5/ 3-L - 1707221

## Classifications

### eCl@ss

eCl@ss 4.0	27180400
eCl@ss 4.1	27180400
eCl@ss 5.0	27180500
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 2.0	EC001031
ETIM 3.0	EC001031
ETIM 4.0	EC002643
ETIM 5.0	EC002643
ETIM 6.0	EC002643
ETIM 7.0	EC002643

### UNSPSC

UNSPSC 6.01	31261501
UNSPSC 7.0901	31261501
UNSPSC 11	31261501
UNSPSC 12.01	31261501
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

CSA / IECCEB CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

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#### Ex Approvals

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### Approval details



# PCB terminal block - MKDSO 2,5/ 3-L - 1707221

## Approvals

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	CB DE1-60046
Nominal voltage UN	450 V		
Nominal current IN	24 A		
mm <sup>2</sup> /AWG/kcmil	2.5		

VDE Gutachten mit Fertigungsüberwachung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40023968
Nominal voltage UN	450 V		
Nominal current IN	24 A		
mm <sup>2</sup> /AWG/kcmil	0.2-2.5		

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	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	20 A	10 A	
mm <sup>2</sup> /AWG/kcmil	30-12	30-12	

## Accessories

Accessories

Mounting material

## PCB terminal block - MKDSO 2,5/ 3-L - 1707221

### Accessories

Shield connection clamp - ME-SAS - 2853899



Shield connection clamp for printed circuit terminal block

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