

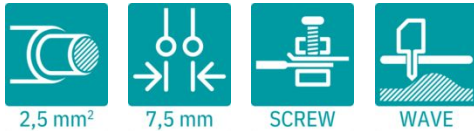
# MKDSO 2,5 HV/ 2R-7,5 KMGY - PCB terminal block



2199773

<https://www.phoenixcontact.com/us/products/2199773>

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Printed circuit board terminal, nominal current: 24 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of rows: 1, number of positions per row: 2, product range: MKDSO 2,5 HV/...-R, pitch: 7.5 mm, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: light gray, Pin layout: Linear pinning, Solder pin [P]: 2.25 mm, number of solder pins per potential: 1. Product with pin output on right side

## Your advantages

- 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

## Commercial data

Item number	2199773
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AC08
Product key	ACHADA
GTIN	4046356464253
Weight per piece (including packing)	4.888 g
Weight per piece (excluding packing)	4.888 g
Customs tariff number	85369010
Country of origin	DE

# MKDSO 2,5 HV/ 2R-7,5 KMGY - PCB terminal block



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## Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	MKDSO 2,5 HV/...-R
Number of positions	2
Pitch	7.5 mm
Number of rows	1
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current $I_N$	24 A
Nominal voltage $U_N$	600 V
Rated voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
Rated voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Connection data

#### Connection technology

Nominal cross section	2.5 mm <sup>2</sup>
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#### Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 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, rigid	0.2 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.25 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	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm

### Mounting

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Mounting type	Wave soldering
Pin layout	Linear pinning

## 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 (4 $\mu\text{m}$ - 8 $\mu\text{m}$ Sn)
Metal surface soldering area (top layer)	Tin (4 $\mu\text{m}$ - 8 $\mu\text{m}$ Sn)

### 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
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

## Notes

Note on application	For reliable conductor connection, always adhere to a defined tightening torque. During conductor connection (mounting), the terminal blocks must be supported (held with one hand, support on the housing).
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## Dimensions

Dimensional drawing	
Pitch	7.5 mm
Width [w]	14.9 mm
Height [h]	22.25 mm
Length [l]	18.8 mm
Solder pin length [P]	2.25 mm
Pin dimensions	0.8 x 1 mm

### PCB design

Hole diameter	1.4 mm
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## Mechanical tests

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## Test for conductor damage and slackening

Specification	IEC 60998-2-1:2002-12
Result	Test passed

## Pull-out test

Specification	IEC 60998-2-1:2002-12
Conductor cross-section/conductor type/tractive force setpoint/actual value	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 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

## Torque test

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

### 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 <sup>9</sup> Ω

### Air clearances and creepage distances |

Specification	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	630 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	8 mm
Rated insulation voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
minimum clearance value - non-homogenous field (III/2)	5.5 mm
minimum creepage distance (III/2)	5.5 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:1995-03
Frequency	10 - 150 - 10 Hz

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Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

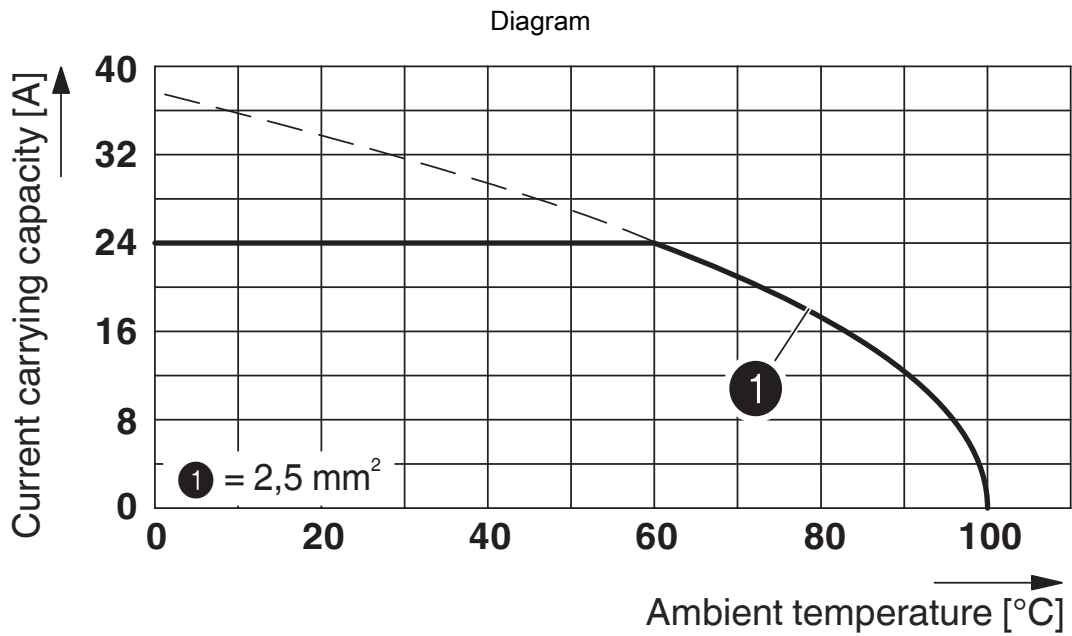
## Glow-wire test

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

## Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 55 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (Depending on the current carrying capacity/derating curve)

## Drawings



Type: MKDSO 2,5 HV/3L-7,5 KMGY

Tested in accordance with DIN EN 60512-5-2: 2003-01

Reduction factor: 1

No. of positions: 3

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2199773>

 <b>cULus Recognized</b> Approval ID: E60425-19770427				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	300 V	20 A	30 - 12	-
C	300 V	20 A	30 - 12	-
D	600 V	5 A	30 - 12	-

 <b>VDE report with production monitoring</b> Approval ID: 40023968				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine	750 V	24 A	-	0.2 - 2.5

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## Classifications

### ECLASS

ECLASS-13.0	27460101
ECLASS-15.0	27460101

### ETIM

ETIM 10.0	EC002643
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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### EF3.1 Climate Change

CO2e kg	0.025 kg CO2e
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