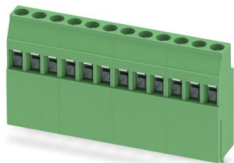


# MKKDSH 3/12-EX - PCB terminal block

1700191

<https://www.phoenixcontact.com/us/products/1700191>

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The figure shows the 3-pos. version

Printed circuit board terminal, nominal current: 20 A, nominal cross section: 2.5 mm<sup>2</sup>, number of potentials: 12, number of rows: 1, number of positions per row: 12, product range: MKKDSH 3-EX, pitch: 5 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: Linear pinning, Solder pin [P]: 5 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Satisfies the more stringent safety requirements of "Ex eb" protection according to IEC 60079-7 for potentially explosive areas
- Conductor connection on several levels enables higher contact density
- Tall type enables conductor connection for sealed PCBs
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve
- The latching on the side enables various numbers of positions to be combined

## Commercial data

Item number	1700191
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA43
Product key	AAMFKB
GTIN	4046356660945
Weight per piece (including packing)	31.72 g
Weight per piece (excluding packing)	31.7 g
Customs tariff number	85369010
Country of origin	DE

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## Technical data

### Product properties

Product type	Printed circuit board terminal
Product family	MKKDSH 3-EX
Product line	COMBICON Terminals M
Type	PC terminal block can be aligned
Number of positions	12
Pitch	5 mm
Number of connections	12
Number of rows	1
Number of potentials	12
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current $I_N$	20 A
Nominal voltage $U_N$	176 V
Rated current / conductor cross-section	20 A/2.5 mm <sup>2</sup>

### Ex data

#### Ex approval

Identification	0344 <sup>Ⓢ</sup> II 2GD / Ex eb IIC Gb
EU-type examination certificate	KEMA 01ATEX2130 U
IECEx certificate	IECEx KEM 07.0019 U

### Connection data

#### Connection technology

Type	PC terminal block can be aligned
Nominal cross section	2.5 mm <sup>2</sup>

#### Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup> 0.2 mm <sup>2</sup> ... 4 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 ... 12
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 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> ... 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>

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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	7 mm
Drive form screw head	Slotted (L)
Tightening torque	0.5 Nm ... 0.6 Nm

## Mounting

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 µm - 8 µm Sn)
Metal surface soldering area (top layer)	Tin (4 µm - 8 µm Sn)

### Material data - housing

Color (Housing)	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

## Notes

Note on application	For safe conductor connection, always adhere to a defined tightening torque. Particularly in the case of PCB terminal blocks with two or three positions, the individual solder pin for each contact point cannot compensate for this. That is why the terminal blocks must be supported during conductor connection (held with one hand, support on the housing).
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## Dimensions

Dimensional drawing	
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Pitch	5 mm
Width [w]	60 mm
Height [h]	36.5 mm
Length [l]	11.1 mm
Installed height	31.5 mm
Solder pin length [P]	5 mm
Pin dimensions	0.9 x 0.9 mm

## PCB design

Hole diameter	1.3 mm
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## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-50 °C ... 110 °C

## Packaging specifications

Type of packaging	packed in cardboard
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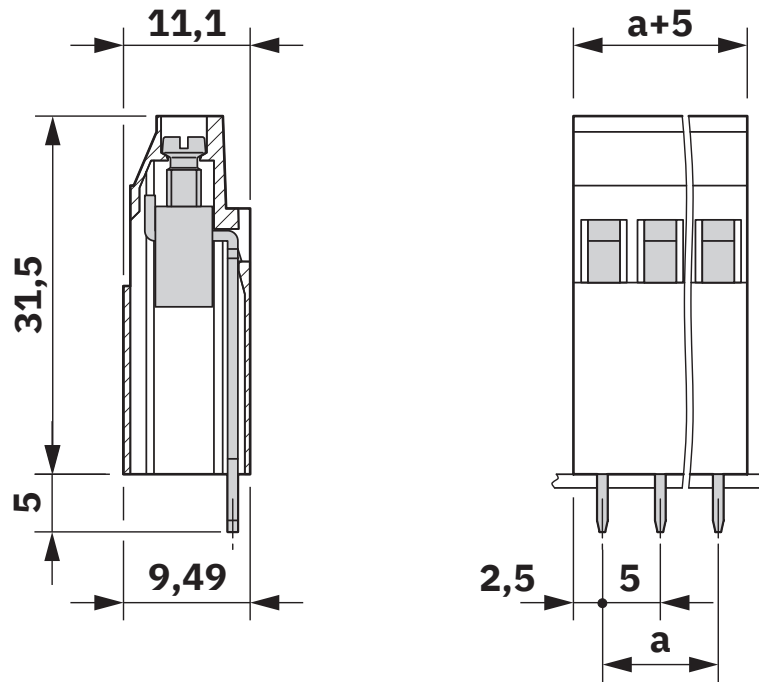


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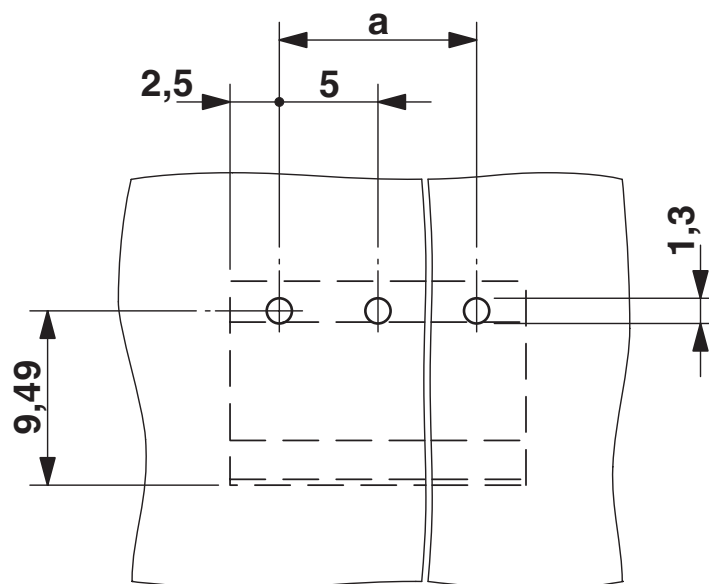
<https://www.phoenixcontact.com/us/products/1700191>

## Drawings

Dimensional drawing



Drilling plan/solder pad geometry



# MKKDSH 3/12-EX - PCB terminal block



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1700191>



**ATEX**

Approval ID: KEMA 01ATEX2130 U



**IECEX**

Approval ID: IECEX KEM 07.0019 U



**CCC**

Approval ID: 2026322313007327

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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-E
	No hazardous substances above the limits

### EU REACH SVHC

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

CO2e kg	0.399 kg CO2e
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