

# MKDS 1,5/ 3-B-5,08 - PCB terminal block



1868746

<https://www.phoenixcontact.com/in/products/1868746>

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PCB terminal block, nominal current: 17.5 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm<sup>2</sup>, number of potentials: 3, number of rows: 1, number of positions per row: 3, product range: MKDS 1,5/..-B, pitch: 5.08 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]: 3.5 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. Connections internally jumpered

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Internal bridging for easily looping through potentials
- The latching on the side enables various numbers of positions to be combined

## Commercial Data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1868746                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to Order (non-returnable) |
| Sales Key                            | AAL                            |
| Product Key                          | AALFGI                         |
| Catalog Page                         | Page 97 (C-1-2013)             |
| GTIN                                 | 4017918127206                  |
| Weight per Piece (including packing) | 4.661 g                        |
| Weight per Piece (excluding packing) | 4.661 g                        |
| Customs tariff number                | 85369010                       |
| Country of origin                    | PL                             |

## Technical Data

### Product properties

|                           |                                  |
|---------------------------|----------------------------------|
| Type                      | PC terminal block can be aligned |
| Product line              | COMBICON Terminals S             |
| Product type              | Printed circuit board terminal   |
| Product family            | MKDS 1,5/..-B                    |
| Number of positions       | 3                                |
| Pitch                     | 5.08 mm                          |
| Number of connections     | 3                                |
| Number of rows            | 1                                |
| Number of potentials      | 3                                |
| Pin layout                | Linear pinning                   |
| Solder pins per potential | 1                                |

### Electrical properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 17.5 A |
| Nominal voltage $U_N$       | 400 V  |
| Degree of pollution         | 3      |
| Rated voltage (III/3)       | 250 V  |
| Rated surge voltage (III/3) | 4 kV   |
| Rated voltage (III/2)       | 400 V  |
| Rated surge voltage (III/2) | 4 kV   |
| Rated voltage (II/2)        | 630 V  |
| Rated surge voltage (II/2)  | 4 kV   |

### Connection data

#### Connection technology

|                       |                                  |
|-----------------------|----------------------------------|
| Type                  | PC terminal block can be aligned |
| Nominal cross section | 1.5 mm <sup>2</sup>              |

#### Conductor connection

|   |   |
|---|---|
| Connection method   | Screw connection with tension sleeve          |
| Conductor cross section rigid   | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section flexible  | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Conductor cross section AWG   | 26 ... 14                                     |
| 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> ... 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, solid   | 0.14 mm <sup>2</sup> ... 1 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> ... 0.5 mm <sup>2</sup>  |
| 2 conductors with the same cross section, flexible, with TWIN                       | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>     |

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|                             |                   |
|-----------------------------|-------------------|
| ferrule with plastic sleeve |                   |
| Stripping length            | 7 mm              |
| Tightening torque           | 0.5 Nm ... 0.6 Nm |

## Mounting

|                       |                |
|-----------------------|----------------|
| Mounting type         | Wave soldering |
| Pin layout            | Linear pinning |
| Drive form screw head | Slotted (L)    |
| Drive form screw head | Slotted (L)    |

## 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   |
| 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

|   |              |
|---|--------------|
| 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       |

### Material data – actuating element

|          |    |
|----------|----|
| Color () | () |
|----------|----|

## Notes

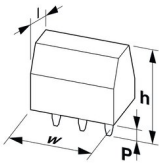
|                     |  |
|---------------------|--|
| Note on application | For safe conductor connection, always adhere to a defined tightening torque. Particularly in the case of PCB terminal blocks with two or three positions, the individual solder pin for each contact point cannot compensate for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

## Dimensions

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|                       |  |
|-----------------------|--|
| Dimensional drawing   |  |
| Pitch                 | 5.08 mm  |
| Width [w]             | 15.24 mm   |
| Height [h]            | 17.3 mm  |
| Length [l]            | 11.6 mm  |
| Installed height      | 13.8 mm  |
| Solder pin length [P] | 3.5 mm   |

## Electrical tests

### Air clearances and creepage distances |

|                                  |       |
|----------------------------------|-------|
| Insulating material group        | I     |
| Rated insulation voltage (III/3) | 250 V |
| Rated surge voltage (III/3)      | 4 kV  |
| Rated insulation voltage (III/2) | 400 V |
| Rated surge voltage (III/2)      | 4 kV  |
| Rated insulation voltage (II/2)  | 630 V |
| Rated surge voltage (II/2)       | 4 kV  |

## Environmental and real-life conditions

### Ambient conditions

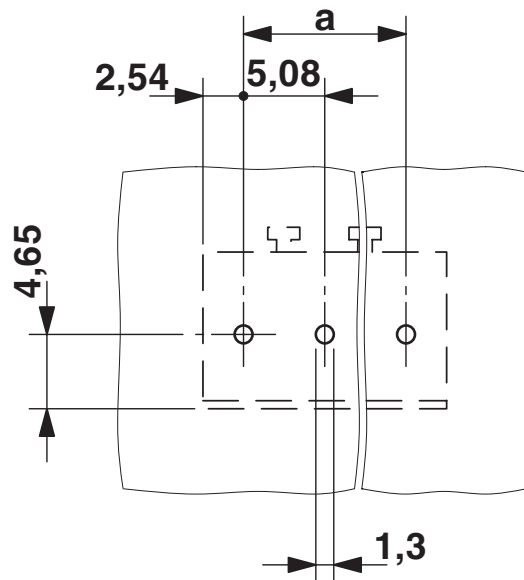
|   |   |
|---|---|
| Ambient temperature (operation)         | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C  |
| Relative humidity (storage/transport)   | 30 % ... 70 %   |
| Ambient temperature (assembly)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

## Packaging specifications

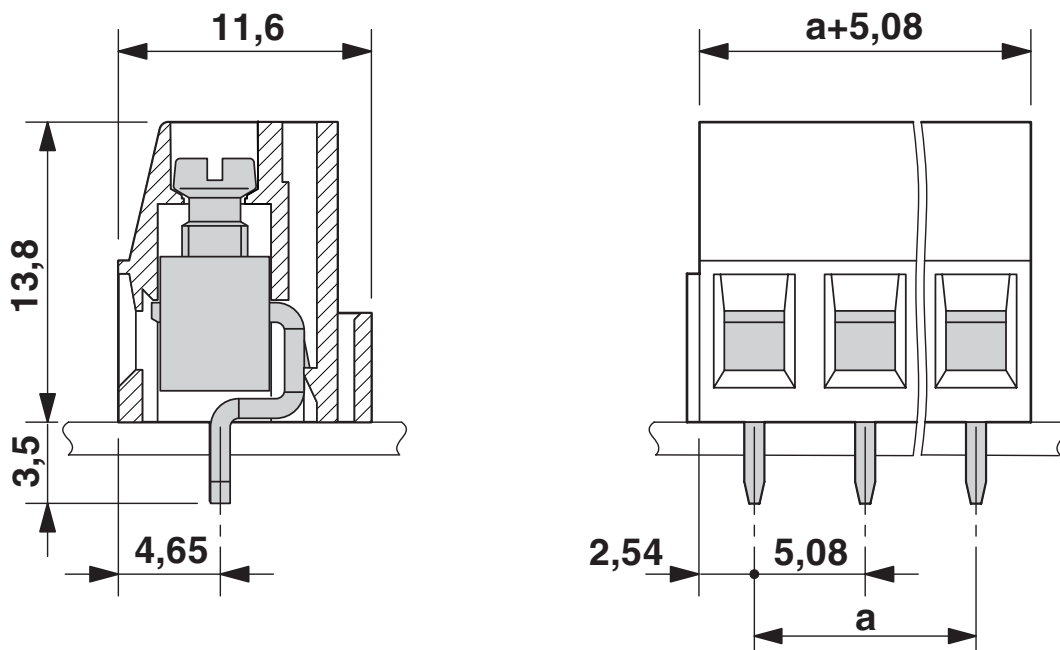
|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

Drawings

Drilling plan/solder pad geometry



Dimensional drawing



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## Approvals



**EAC**

Approval ID: B.01687



**cULus Recognized**

Approval ID: E60425-19770427

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 300 V                 | 10 A                  | 30 - 14           | -                           |
|  | 300 V                 | 10 A                  | 30 - 14           | -                           |



**DNV GL**

Approval ID: TAE00001EV



**IECEE CB Scheme**

Approval ID: DE1-66542

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 400 V                 | 24 A                  | -                 | 0.2 - 2.5                   |



**VDE Zeichengenehmigung**

Approval ID: 40055394

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 400 V                 | 24 A                  | -                 | 0.2 - 2.5                   |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27460101 |
| ECLASS-12.0 | 27460101 |
| ECLASS-13.0 | 27460101 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC002643 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |



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## Accessories

### SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/in/products/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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### SK 5/3,8:FORTL.ZAHLEN - Marker card

0804183

<https://www.phoenixcontact.com/in/products/0804183>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

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## CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/in/products/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 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

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