

## PCB terminal block - MKDS 3/ 3 (13) - 1711055

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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>, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, product range: MKDS 3, 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, type of packaging: packed in cardboard. The article can be aligned to create different nos. of positions!

The figure shows a combination as a 15-position version

### Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ 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



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| Minimum order quantity               | 50 pc                                                                                                   |
| GTIN                                 | <br>4 017918 315368 |
| GTIN                                 | 4017918315368                                                                                           |
| Weight per Piece (excluding packing) | 4.400 g                                                                                                 |
| Custom tariff number                 | 85369010                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Item properties

|                           |                    |
|---------------------------|--------------------|
| Brief article description | PCB terminal block |
| Range of articles         | MKDS 3             |

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## Technical data

### Item properties

|                       |                |
|-----------------------|----------------|
| Pitch                 | 5 mm           |
| Number of positions   | 3              |
| Drive form screw head | Slotted (L)    |
| Screw thread          | M3             |
| Mounting type         | Wave soldering |
| Pin layout            | Linear pinning |
| Number of levels      | 1              |
| Number of connections | 3              |
| Number of potentials  | 3              |

### Electrical parameters

|                             |       |
|-----------------------------|-------|
| Nominal current             | 24 A  |
| Nom. voltage                | 400 V |
| Rated voltage (III/3)       | 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          |
| pluggable                                                                                 | Yes                                           |
| Conductor cross section solid                                                             | 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 / kcmil                                                       | 24 ... 12                                     |
| 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                                               | 0.2 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> ... 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 |
|------|-----------------------------------------------------------------------------------|

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## Technical data

### Material data - contact

|                                          |                   |
|------------------------------------------|-------------------|
| Contact material                         | Cu alloy          |
| Surface characteristics                  | Tin-plated        |
| Metal surface terminal point (top layer) | Tin (4 - 8 µm Sn) |
| Metal surface soldering area (top layer) | Tin (4 - 8 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       |

### Dimensions for the product

|                             |                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------|
| Caption                     | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ]                | 11.2 mm                                                                                    |
| Width [ w ]                 | 15 mm                                                                                      |
| Height [ h ]                | 23 mm                                                                                      |
| Pitch                       | 5 mm                                                                                       |
| Height (without solder pin) | 18 mm                                                                                      |
| Solder pin [P]              | 5 mm                                                                                       |
| Pin spacing                 | 5 mm                                                                                       |
| Pin dimensions              | 0.9 x 0.9 mm                                                                               |

### Dimensions for PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.3 mm |
| Pin spacing   | 5 mm   |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

### General product information

|              |                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of note | Note on application                                                                                                                                                                                               |
| Note         | 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 |

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## Technical data

### General product information

|  |                                                                                                                                                  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------|
|  | compensate for this. That is why the terminal blocks must be supported during conductor connection (held with one hand, support on the housing). |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------|

### 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) |

### Electrical tests

|                             |         |
|-----------------------------|---------|
| Rated current               | 24 A    |
| Conductor cross section     | 2.5 mm² |
| Rated voltage (III/2)       | 400 V   |
| Rated surge voltage (III/2) | 4 kV    |

### Air clearances and creepage distances

|                                                 |                                               |
|-------------------------------------------------|-----------------------------------------------|
| Clearances and creepage distances               | IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09 |
| Specification                                   | IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09 |
| 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)         | 3 mm                                          |
| Minimum creepage distance value (II/2)          | 3.2 mm                                        |
| Note on connection cross section                | With connected conductor 4 mm² (solid).       |

### Standards and Regulations

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

### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 11.0   | 27460101 |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| 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 9.0 | 27440401 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | 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

DNV GL / CSA / SEV / EAC / cULus Recognized / IECEx CB Scheme

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##### Ex Approvals

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#### Approval details

## PCB terminal block - MKDS 3/ 3 (13) - 1711055

### Approvals

|        |                                                                                   |                                                                                   |            |
|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE00001EV |
|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------|

|                    |                                                                                   |                                                                                                                                         |       |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|
| 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                                                                                                                                    |       |
| mm²/AWG/kcmil      | 28-12                                                                             | 28-12                                                                                                                                   |       |

|                    |                                                                                   |                                                                       |         |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------|
| SEV                |  | <a href="https://www.eurofins.ch/de/">https://www.eurofins.ch/de/</a> | IK-4497 |
|                    |                                                                                   |                                                                       |         |
| Nominal voltage UN | 250 V                                                                             |                                                                       |         |
| Nominal current IN | 28 A                                                                              |                                                                       |         |
| mm²/AWG/kcmil      | 4                                                                                 |                                                                       |         |

|     |                                                                                     |  |         |
|-----|-------------------------------------------------------------------------------------|--|---------|
| EAC |  |  | B.01687 |
|-----|-------------------------------------------------------------------------------------|--|---------|

|                    |                                                                                     |                                                                                                                                                       |                 |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 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 | 15 A                                                                                | 10 A                                                                                                                                                  |                 |
| mm²/AWG/kcmil      | 30-12                                                                               | 30-12                                                                                                                                                 |                 |

|                    |                                                                                     |                                                           |          |
|--------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|----------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | CH-10787 |
|                    |                                                                                     |                                                           |          |
| Nominal voltage UN | 250 V                                                                               |                                                           |          |
| Nominal current IN | 32 A                                                                                |                                                           |          |

## PCB terminal block - MKDS 3/ 3 (13) - 1711055

### Approvals

|               |   |
|---------------|---|
|               |   |
| mm²/AWG/kcmil | 4 |

### Accessories

#### Accessories

#### Bridge

Insertion bridge - EBP 2- 5 - 1733169



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

Insertion bridge - EBP 3- 5 - 1733172



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

#### Labeled terminal marker

Marker card - SK 5/3,8:FORTL.ZAHLEN - 0804183



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: 5 mm, lettering field size: 5 x 3.8 mm

#### Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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### Accessories

#### Pitch spacer

Pitch spacer - RZ 1,25-MKDS 3 - 1703047



Pitch spacer, for adjusting the pitches between MKDS and GMKDS terminal blocks in mixed rows, 1.25 mm thick

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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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#### Terminal marking

Marker card - SK 5/3,8:UNBEDRUCKT - 0805409



Marker card, Card, white, unlabeled, can be labeled with: Marker pen, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

Marker card - SK U/3,8 WH:UNBEDRUCKT - 0803906



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440