

## PCB terminal block - MKDS 10 HV/ 3-ZB-10,16 H1L NZ - 1701321

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PCB terminal block, nominal current: 76 A, nom. voltage: 1000 V, pitch: 10.16 mm, number of positions: 3, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green

The figure shows a 5-pos. version of the product

### Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- ✓ Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve



### Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 50 pc         |
| GTIN         |               |
| GTIN         | 4046356525435 |

### Technical data

#### Item properties

|                           |                                         |
|---------------------------|-----------------------------------------|
| Brief article description | PCB terminal block                      |
| Range of articles         | MKDS 10 HV                              |
| Pitch                     | 10.16 mm                                |
| Number of positions       | 3                                       |
| Connection method         | Screw connection with tension sleeve    |
| Drive form screw head     | Philipps recess with slotted Torx (H1L) |
| Screw thread              | M4                                      |
| Mounting type             | Wave soldering                          |
| Pin layout                | Zigzag pinning W                        |
| Number of levels          | 1                                       |

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## Technical data

### Electrical parameters

|                                  |        |
|----------------------------------|--------|
| Rated current                    | 76 A   |
| Rated insulation voltage (III/2) | 1000 V |
| Rated surge voltage (III/2)      | 8 kV   |

### Connection capacity

|                                                                                        |                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------|
| Conductor cross section solid                                                          | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross section flexible                                                       | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross section AWG / kcmil                                                    | 20 ... 6                                   |
| Conductor cross section flexible, with ferrule without plastic sleeve                  | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                   | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| 2 conductors with same cross section, solid                                            | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible                                         | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 2 conductors with same cross section, stranded, ferrules without plastic sleeve        | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>  |
| 2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Stripping length                                                                       | 10 mm                                      |
| Torque                                                                                 | 1.2 Nm ... 1.5 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

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| 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      | Schematic representation – for additional information, see product range drawing in the Download Center |
| Length [ l ] | 18.7 mm                                                                                                 |
| Width [ w ]  | 30.48 mm                                                                                                |
| Height [ h ] | 35.8 mm                                                                                                 |

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## Technical data

### Dimensions for the product

|                             |            |
|-----------------------------|------------|
| Pitch                       | 10.16 mm   |
| Height (without solder pin) | 30.8 mm    |
| Solder pin [P]              | 5 mm       |
| Pin dimensions              | 1 x 0.9 mm |
| Dimension a                 | 20.32 mm   |

### Dimensions for PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.5 mm |
|---------------|--------|

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| 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           |

### Termination and connection method

|                 |                       |
|-----------------|-----------------------|
| Connection test | IEC 60998-2-2:2002-12 |
| Test result     | Test passed           |

### Pull-out test

|                                                          |                                     |
|----------------------------------------------------------|-------------------------------------|
| Pull-out test                                            | IEC 60998-2-1:2002-12               |
|                                                          | Test passed                         |
| Conductor cross section / conductor type / tensile force | 0.5 mm² / solid / stranded / > 20 N |
|                                                          | 10 mm² / flexible / > 90 N          |
|                                                          | 16 mm² / solid / > 100 N            |

### Mechanical tests according to standard

|                    |                          |
|--------------------|--------------------------|
| Test specification | IEC 60998-2-1 (in parts) |
|--------------------|--------------------------|

### Electrical tests

|                                  |        |
|----------------------------------|--------|
| Rated current                    | 76 A   |
| Rated insulation voltage (III/2) | 1000 V |
| Rated surge voltage (III/2)      | 8 kV   |

### Air clearances and creepage distances

|                                  |        |
|----------------------------------|--------|
| Insulating material group        | I      |
| Voltage                          | 800 V  |
| Rated insulation voltage (III/3) | 800 V  |
| Rated insulation voltage (III/2) | 1000 V |
| Rated insulation voltage (II/2)  | 1000 V |
| Rated surge voltage (III/3)      | 8 kV   |

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## Technical data

### Air clearances and creepage distances

|                             |      |
|-----------------------------|------|
| Rated surge voltage (III/2) | 8 kV |
| Rated surge voltage (II/2)  | 8 kV |

### Current carrying capacity / derating curves

|               |                          |
|---------------|--------------------------|
| Specification | IEC 60998-2-1 (in parts) |
|---------------|--------------------------|

### Vibration test

|                                                                                                           |                                                             |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Resistance to ageing, to humidity conditions, to ingress of solid objects and to harmful ingress of water | Test passed IEC 60998-1:2002-12 168 h/100°C 48 h/30 °C/92 % |
| Test result                                                                                               | Test passed                                                 |
| Test specification                                                                                        | IEC 60998-1:2002-12                                         |
| Dry heat                                                                                                  | 168 h/100°C                                                 |
| Humid heat                                                                                                | 48 h/30 °C/92 %                                             |

### Resistance to ageing, humidity and penetration of solids

|                    |                     |
|--------------------|---------------------|
| Test result        | Test passed         |
| Test specification | IEC 60998-1:2002-12 |
| Dry heat           | 168 h/100°C         |
| Humid heat         | 48 h/30 °C/92 %     |

### Standards and Regulations

|                                  |        |
|----------------------------------|--------|
| Connection in acc. with standard | EN-VDE |
|----------------------------------|--------|

### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Approvals

### Approvals

Approvals

EAC / cULus Recognized

Ex Approvals

### Approval details

|     |                                                                                     |         |
|-----|-------------------------------------------------------------------------------------|---------|
| EAC |  | B.01742 |
|-----|-------------------------------------------------------------------------------------|---------|

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### Approvals

|                                                                                                                                                                                                                                                                          |       |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| 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     | C     |
| Nominal voltage UN                                                                                                                                                                                                                                                       | 600 V | 600 V |
| Nominal current IN                                                                                                                                                                                                                                                       | 60 A  | 60 A  |
| mm²/AWG/kcmil                                                                                                                                                                                                                                                            | 20-6  | 20-6  |

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