

# MKDSP 10N/ 4-10,16 SZS BD:L1 - PCB terminal block



1774263

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PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of potentials: 4, number of rows: 1, number of positions per row: 4, product range: MKDSP 10N, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Wave soldering, conductor/PCB connection direction: 0 °, Pin layout: Linear double pinning, Solder pin [P]: 5 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Quick and convenient testing using integrated test option
- The latching on the side enables various numbers of positions to be combined
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1774263                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA02                           |
| Product key                          | AANFFF                         |
| GTIN                                 | 4046356481717                  |
| Weight per piece (including packing) | 30.3 g                         |
| Weight per piece (excluding packing) | 28.2 g                         |
| Customs tariff number                | 85369010                       |
| Country of origin                    | PL                             |

## Technical data

### Product properties

|                           |                                  |
|---------------------------|----------------------------------|
| Product type              | Printed circuit board terminal   |
| Product family            | MKDSP 10N                        |
| Product line              | COMBICON Terminals L             |
| Type                      | PC terminal block can be aligned |
| Number of positions       | 4                                |
| Pitch                     | 10.16 mm                         |
| Number of connections     | 4                                |
| Number of rows            | 1                                |
| Number of potentials      | 4                                |
| Pin layout                | Linear double pinning            |
| Solder pins per potential | 2                                |

### Electrical properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 76 A   |
| Nominal voltage $U_N$       | 1000 V |
| Degree of pollution         | 3      |
| Rated voltage (III/3)       | 690 V  |
| Rated surge voltage (III/3) | 8 kV   |
| Rated voltage (III/2)       | 1000 V |
| Rated surge voltage (III/2) | 8 kV   |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (II/2)  | 6 kV   |

### Connection data

#### Connection technology

|                       |                                  |
|-----------------------|----------------------------------|
| Type                  | PC terminal block can be aligned |
| Nominal cross section | 16 mm <sup>2</sup>               |

#### Conductor connection

|                                                                                     |                                             |
|-------------------------------------------------------------------------------------|---------------------------------------------|
| Connection method                                                                   | Screw connection with tension sleeve        |
| Conductor cross section rigid                                                       | 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                                                         | 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> ... 4 mm <sup>2</sup>   |
| 2 conductors with same cross section, flexible                                      | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| 2 conductors with the same cross section, flexible, with TWIN                       | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |

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|                             |                   |
|-----------------------------|-------------------|
| ferrule with plastic sleeve |                   |
| Stripping length            | 10 mm             |
| Tightening torque           | 1.2 Nm ... 1.5 Nm |

## Mounting

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

## Material specifications

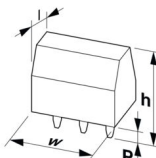
### Material data - contact

|                                             |                                                                                  |
|---------------------------------------------|----------------------------------------------------------------------------------|
| Note                                        | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material                            | Cu alloy                                                                         |
| 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

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

|                       |                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing   |  |
| Pitch                 | 10.16 mm                                                                             |
| Width [w]             | 40.64 mm                                                                             |
| Height [h]            | 34.3 mm                                                                              |
| Length [l]            | 18.4 mm                                                                              |
| Installed height      | 29.3 mm                                                                              |
| Solder pin length [P] | 5 mm                                                                                 |

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|                |            |
|----------------|------------|
| Pin dimensions | 1 x 0.9 mm |
| PCB design     |            |
| Hole diameter  | 1.5 mm     |

## Mechanical tests

### 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 | 0.5 mm <sup>2</sup> / solid / > 20 N    |
|                                                                             | 0.5 mm <sup>2</sup> / flexible / > 20 N |
|                                                                             | 16 mm <sup>2</sup> / solid / > 100 N    |
|                                                                             | 16 mm <sup>2</sup> / flexible / > 100 N |

### Torque test

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60998-2-1:2002-12 |
|---------------|-----------------------|

## 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 | > 5 MΩ              |

### Air clearances and creepage distances |

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Specification                                          | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| Rated insulation voltage (III/3)                       | 690 V               |
| Rated surge voltage (III/3)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/3) | 8 mm                |
| minimum creepage distance (III/3)                      | 8 mm                |
| Rated insulation voltage (III/2)                       | 1000 V              |
| Rated surge voltage (III/2)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/2) | 8 mm                |
| minimum creepage distance (III/2)                      | 8 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 60068-2-6:2007-12       |
| Frequency              | 10 - 150 - 10 Hz            |
| 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                       |

## Glow-wire test

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

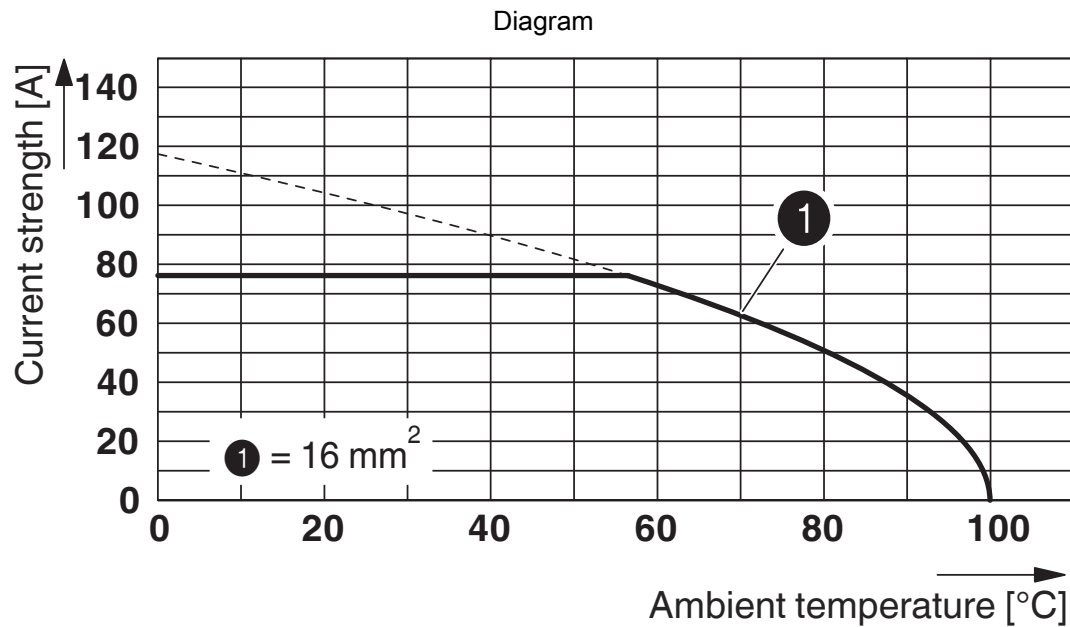
## Ambient conditions

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



Type: MKDSP 10N/...-10,16

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

Reduction factor = 1

No. of positions: 5

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## Classifications

### ECLASS

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

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121432 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

### 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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