

## PCB terminal block - MKDSP 10HV/ 3-10,16 - 1929520

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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>, 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, Pin layout: Linear double pinning, Solder pin [P]: 5 mm. The article can be aligned to create different nos. of positions!

### 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



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 50 pc   |
| GTIN         | <br>4 017918 819644 |
| GTIN         | 4017918819644   |

### Technical data

#### Item properties

|                           |                                      |
|---------------------------|--------------------------------------|
| Brief article description | PCB terminal block                   |
| Range of articles         | MKDSP 10HV                           |
| Pitch                     | 10.16 mm                             |
| Number of positions       | 3                                    |
| Connection method         | Screw connection with tension sleeve |
| Drive form screw head     | Slotted (L)                          |
| Screw thread              | M4                                   |
| Mounting type             | Wave soldering                       |
| Pin layout                | Linear double pinning                |
| Number of levels          | 1                                    |

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## Technical data

### Item properties

|                       |   |
|-----------------------|---|
| Number of connections | 3 |
| Number of potentials  | 3 |

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 76 A   |
| Nom. voltage                | 1000 V |
| Rated voltage               | 690 V  |
| Rated voltage (III/2)       | 1000 V |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (III/3) | 8 kV   |
| Rated surge voltage (III/2) | 8 kV   |
| Rated surge voltage (II/2)  | 6 kV   |

### Connection capacity

|   |   |
|---|---|
| Connection method   | Screw connection with tension sleeve        |
| pluggable   | Yes   |
| 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> ... 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 ferrule 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

|                           |              |
|---------------------------|--------------|
| Housing color             | green (6021) |
| Insulating material       | PA           |
| Insulating material group | I            |

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## Technical data

### Material data - housing

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

|                             |            |
|-----------------------------|------------|
| Length [ l ]                | 22 mm      |
| Width [ w ]                 | 30.48 mm   |
| Height [ h ]                | 35.8 mm    |
| Pitch                       | 10.16 mm   |
| Height (without solder pin) | 30.8 mm    |
| Solder pin [P]              | 5 mm       |
| Pin spacing                 | 10.16 mm   |
| Pin dimensions              | 1 x 0.9 mm |

### Dimensions for PCB design

|               |          |
|---------------|----------|
| Hole diameter | 1.5 mm   |
| Pin spacing   | 10.16 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 ... 100 °C (Depending on the current carrying capacity/derating curve) |

### Termination and connection method

|  |                       |
|--|-----------------------|
| Test for conductor damage and slackening | IEC 60998-2-1:1990-04 |
|  | Test passed           |

### Pull-out test

|  |   |
|--|---|
| Pull-out test  | IEC 60998-2-1:1990-04                   |
|  | Test passed                             |
| Conductor cross section / conductor type / tensile force | 0.5 mm <sup>2</sup> / solid / > 30 N    |
|  | 0.5 mm <sup>2</sup> / flexible / > 30 N |
|  | 16 mm <sup>2</sup> / solid / > 100 N    |
|  | 10 mm <sup>2</sup> / flexible / > 90 N  |

### Mechanical tests according to standard

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

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## Technical data

### Electrical tests

|                             |                    |
|-----------------------------|--------------------|
| Rated current               | 76 A               |
| Conductor cross section     | 16 mm <sup>2</sup> |
| Rated voltage (III/2)       | 1000 V             |
| Rated surge voltage (III/2) | 8 kV               |

### Air clearances and creepage distances

|   |                     |
|---|---------------------|
| Clearances and creepage distances               | IEC 60664-1:2007-04 |
| Specification                                   | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 8 mm                |
| Minimum clearance - inhomogeneous field (III/2) | 8 mm                |
| Minimum clearance - inhomogeneous field (II/2)  | 5.5 mm              |
| Minimum creepage distance value (III/3)         | 8 mm                |
| Minimum creepage distance value (III/2)         | 5 mm                |
| Minimum creepage distance value (II/2)          | 5 mm                |

### Temperature-rise test

|                                   |                                |
|-----------------------------------|--------------------------------|
| Specification                     | IEC 60998-2-1:1990-04          |
| Result                            | Test passed                    |
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:1995-03  |
| Result                 | Test passed            |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Acceleration           | 5 g (60.1 - 150 Hz)    |
| Test duration per axis | 2.5 h                  |

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

|                    |                       |
|--------------------|-----------------------|
| Test result        | Test passed           |
| Test specification | IEC 60998-2-1:1990-04 |
| Dry heat           | 168 h/100°C           |
| Humid heat         | 48 h/30 °C/92 %       |

### Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60998-2-1:1990-04 |
| Result                                       | Test passed           |
| Insulation resistance, neighboring positions | 10 <sup>9</sup> Ω     |

### Glow-wire test

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60998-2-1:1990-04 |
| Result        | Test passed           |
| Temperature   | 850 °C                |

# PCB terminal block - MKDSP 10HV/ 3-10,16 - 1929520

## Technical data

### Glow-wire test

|                  |     |
|------------------|-----|
| Time of exposure | 5 s |
|------------------|-----|

### Mechanical strength/tumbling barrel test

|                       |                       |
|-----------------------|-----------------------|
| Specification         | IEC 60998-2-1:1990-04 |
| Height of fall        | 50 cm                 |
| Number of drop cycles | 50                    |

### Standards and Regulations

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

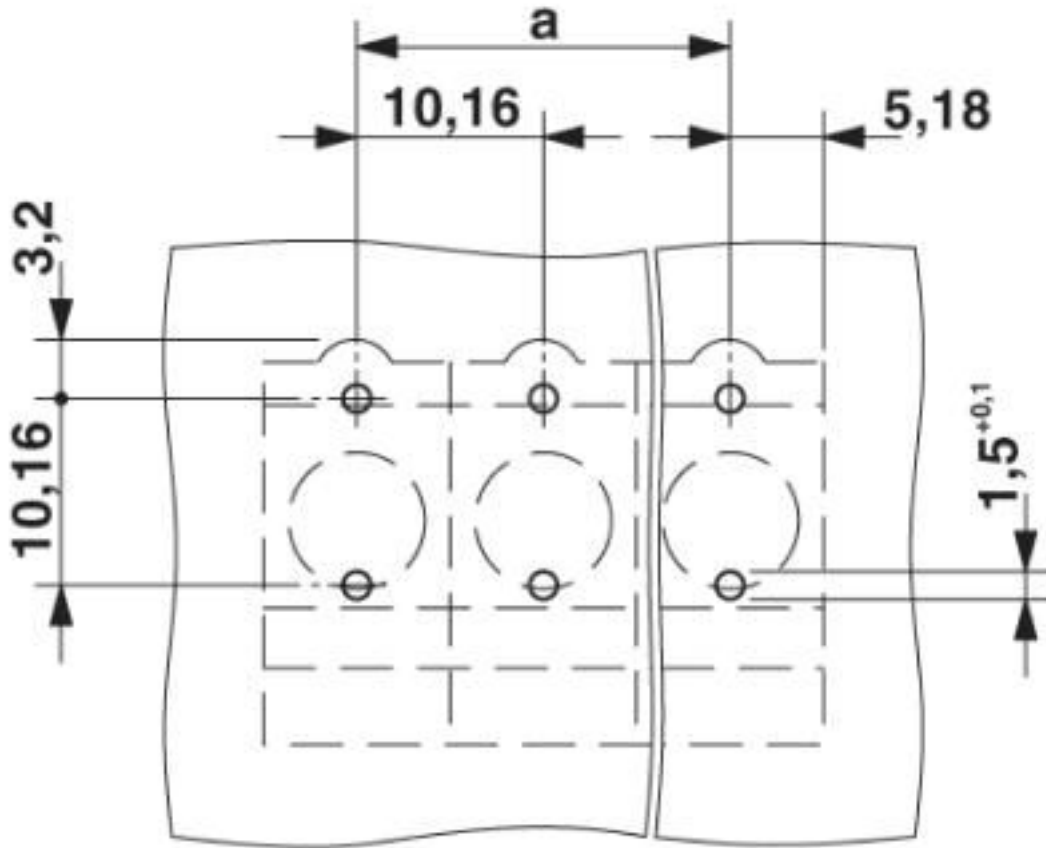
### Environmental Product Compliance

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

## Drawings

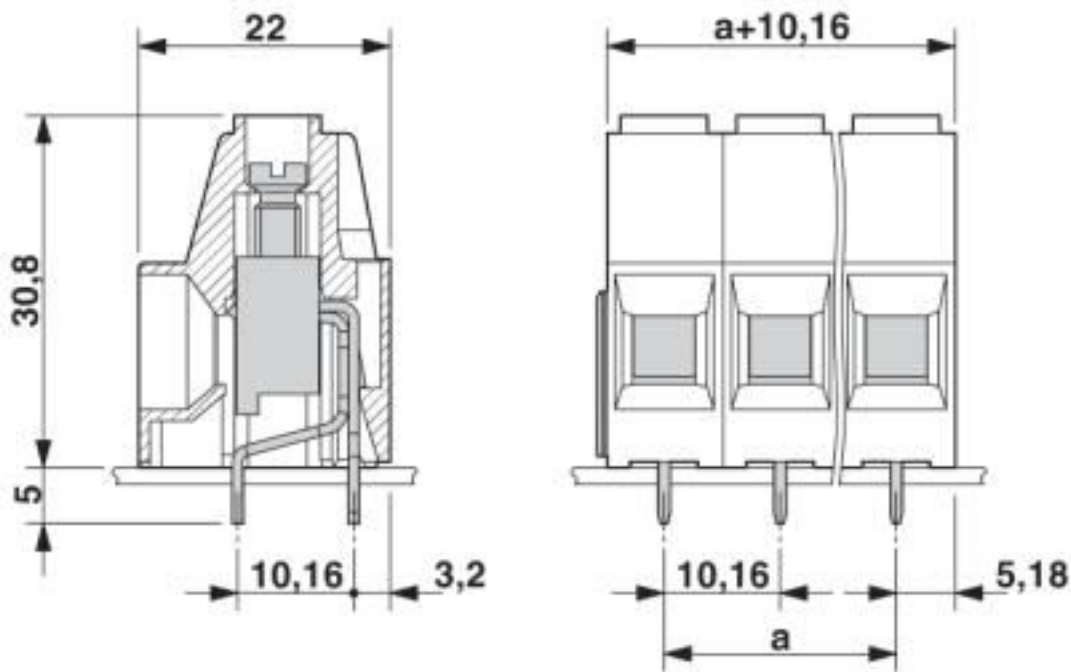
# PCB terminal block - MKDSP 10HV/ 3-10,16 - 1929520

Drilling diagram



# PCB terminal block - MKDSP 10HV/ 3-10,16 - 1929520

Dimensional drawing



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| 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 8.0    | 27440401 |
| eCl@ss 9.0    | 27440401 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002643 |
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211801 |
| UNSPSC 7.0901 | 39121432 |
| UNSPSC 11     | 39121432 |

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## Classifications

### UNSPSC

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


#### Approvals


IECEE CB Scheme / SEV / EAC / cULus Recognized

#### Ex Approvals

### Approval details

|                            |   |   |             |
|----------------------------|---|---|-------------|
| IECEE CB Scheme            |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | CH-10724-A1 |
| Nominal voltage UN         | 690 V   |   |             |
| Nominal current IN         | 57 A  |   |             |
| mm <sup>2</sup> /AWG/kcmil | 16  |   |             |

|                            |   |   |            |
|----------------------------|---|---|------------|
| SEV                        |  | <a href="https://www.eurofins.ch/de/">https://www.eurofins.ch/de/</a> | IK-4486-A1 |
| Nominal voltage UN         | 690 V   |   |            |
| Nominal current IN         | 57 A  |   |            |
| mm <sup>2</sup> /AWG/kcmil | 16  |   |            |

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



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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   | D     |
| Nominal voltage UN         | 300 V | 300 V   | 600 V |
| Nominal current IN         | 60 A  | 60 A  | 5 A   |
| mm <sup>2</sup> /AWG/kcmil | 20-6  | 20-6  | 20-6  |

## Accessories

### Accessories

#### Crimping tool

Crimping pliers - CRIMPFOX 6 - 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

Crimping pliers - CRIMPFOX 16 S - 1207983



Crimping pliers for ferrules up to 16 mm<sup>2</sup>

#### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



## PCB terminal block - MKDSP 10HV/ 3-10,16 - 1929520

### Accessories

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Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



Insulating sleeve - MPS-IH GY - 0201728

Insulating sleeve, color: gray



Insulating sleeve - MPS-IH GN - 0201702

Insulating sleeve, color: green



Insulating sleeve - MPS-IH YE - 0201692

Insulating sleeve, color: yellow



Insulating sleeve - MPS-IH BU - 0201689

Insulating sleeve, color: blue



Pitch spacer

## PCB terminal block - MKDSP 10HV/ 3-10,16 - 1929520

### Accessories

Pitch spacer - RZ-MKDSP 10 HV-2,54 - 1929672



Pitch spacer, raises the pitch by 2.54 mm, interlocks with terminal block, color: green

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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 strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5#mm, Number of individual labels: 90000

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### Test plug terminal block

Reducing plug - RPS - 0201647



Reducing plug, color: gray

Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

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### Additional products

## PCB terminal block - MKDSP 10HV/ 3-10,16 - 1929520

### Accessories

PCB terminal block - MKDSP 10HV/ 2-10,16 - 1929517



PCB terminal block, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, pitch: 10.16 mm, number of positions: 2, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear double pinning, Solder pin [P]: 5 mm. The article can be aligned to create different nos. of positions!

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