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PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

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PCB terminal block, nominal current: 76 A, nom. voltage: 1000 V, 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

Why buy this product

- 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 STK |
| GTIN |  4 046356 073769 |
| GTIN | 4046356073769 |

Technical data

Item properties

| | |
|---------------------------|--------------------------------------|
| Brief article description | PCB terminal block |
| Range of articles | MKDS 10 HV |
| Pitch | 10.16 mm |
| Number of positions | 2 |
| Connection method | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L) |
| Screw thread | M4 |
| Mounting type | Wave soldering |
| Pin layout | Zigzag pinning W |
| Number of levels | 1 |

Electrical parameters

PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

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 ² ... 16 mm ² |
| Conductor cross section flexible | 0.5 mm ² ... 16 mm ² |
| Conductor cross section AWG / kcmil | 20 ... 6 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.5 mm ² ... 16 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.5 mm ² ... 16 mm ² |
| 2 conductors with same cross section, solid | 0.5 mm ² ... 6 mm ² |
| 2 conductors with same cross section, flexible | 0.5 mm ² ... 6 mm ² |
| 2 conductors with same cross section, stranded, ferrules without plastic sleeve | 0.5 mm ² ... 4 mm ² |
| 2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve | 0.5 mm ² ... 6 mm ² |

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 |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |

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] | 20.32 mm |
| Height [h] | 35.8 mm |
| Pitch | 10.16 mm |
| Height (without solder pin) | 30.8 mm |
| Solder pin [P] | 5 mm |
| Pin dimensions | 1 x 0.9 mm |

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Technical data

Dimensions for the product

| | |
|-------------|----------|
| Dimension a | 10.16 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. |

Processing notes

| | |
|---------------|----------------------------------|
| Process | Wave soldering |
| Specification | Following IEC 61760-1:2006-04 |
| | Following IEC 60068-2-54:2006-04 |

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 mm ² solid / stranded 20 N > 0.5 mm ² / solid / stranded / > 20 N |
| | 10 mm ² flexible 90 N > 10 mm ² / flexible / > 90 N |
| | 16 mm ² solid 100 N > 16 mm ² / 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 |
| Comparative tracking index (IEC 60112:2003-01) | CTI 600 |
| Voltage | 800 V |
| Rated insulation voltage (III/3) | 800 V |
| Rated insulation voltage (III/2) | 1000 V |
| Rated insulation voltage (II/2) | 1000 V |

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Technical data

Air clearances and creepage distances

| | |
|---|-------|
| Rated surge voltage (III/3) | 8 kV |
| Rated surge voltage (III/2) | 8 kV |
| Rated surge voltage (II/2) | 8 kV |
| Minimum clearance - inhomogeneous field (III/3) | 8 mm |
| Minimum clearance - inhomogeneous field (III/2) | 8 mm |
| Minimum clearance - inhomogeneous field (II/2) | 8 mm |
| Minimum creepage distance value (III/3) | 10 mm |
| Minimum creepage distance value (III/2) | 8 mm |
| Minimum creepage distance value (II/2) | 10 mm |

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 |
| | CUL |
| Flammability rating according to UL 94 | V0 |

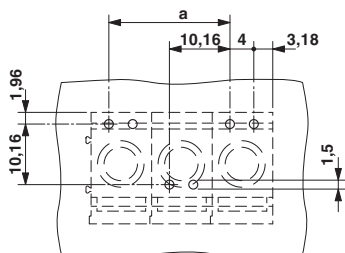
Environmental Product Compliance

| | |
|------------|---|
| 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" |

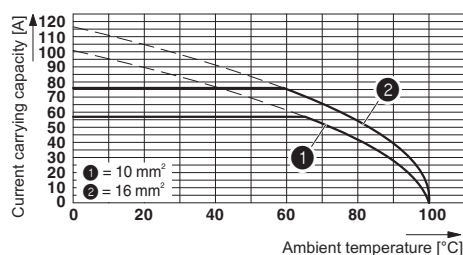
Drawings

PCB terminal block - MKDS 10 HV/ 2-ZB-10,16 - 1709681

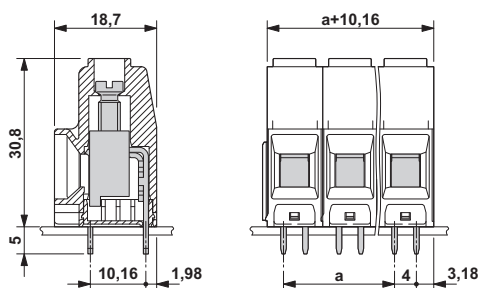
Drilling diagram



Diagram



Dimensional drawing



The figure shows the dimensional drawing of the 3-pos. version of the product

Approvals

Approvals

Approvals

SEV / EAC / cULus Recognized / IECCE CB Scheme

Ex Approvals


Approval details


| | | | |
|--------------------|-------|---|------------|
| SEV | | https://www.electrosuisse.ch/en/meta/shop/product-certificates.html | IK-3542-M1 |
| Nominal voltage UN | 800 V | | |
| Nominal current IN | 76 A | | |
| mm²/AWG/kcmil | 10 | | |

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

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Approvals

| | | | |
|----------------------------|---|---|-----------------|
| cULus Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19770427 |
| | B | C | |
| Nominal voltage UN | 600 V | 600 V | |
| Nominal current IN | 60 A | 60 A | |
| mm ² /AWG/kcmil | 20-6 | 20-6 | |

| | | | |
|----------------------------|---|---|---------|
| IECEE CB Scheme |  | http://www.iecee.org/ | CH-8225 |
| | | | |
| Nominal voltage UN | 800 V | | |
| Nominal current IN | 76 A | | |
| mm ² /AWG/kcmil | 10 | | |

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