

KDS 3-SI - PCB terminal block



1780112

<https://www.phoenixcontact.com/us/products/1780112>

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Printed circuit board terminal, nominal current: 6.3 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: KDS 3-SI, pitch: 10.16 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]: 3.5 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard. The article can be aligned to create different nos. of positions! The current is determined by the fuse used.

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
- Two solder pins reduce the mechanical strain on the soldering spots
- The latching on the side enables various numbers of positions to be combined

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1780112 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | AA13 |
| Product key | AAMFFD |
| GTIN | 4017918040734 |
| Weight per piece (including packing) | 12.155 g |
| Weight per piece (excluding packing) | 11.877 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

Technical data

Product properties

| | |
|---------------------------|---|
| Product type | Printed circuit board terminal |
| Product family | KDS 3-SI |
| Product line | COMBICON Terminals M |
| Type | PCB terminal block can be aligned in rows + fuse terminal block |
| Number of positions | 1 |
| Pitch | 10.16 mm |
| Number of connections | 1 |
| Number of rows | 1 |
| Number of potentials | 1 |
| Pin layout | Linear pinning |
| Solder pins per potential | 2 |

Electrical properties

Properties

| | |
|-----------------------------|-------|
| Nominal current I_N | 6.3 A |
| Nominal voltage U_N | 320 V |
| Rated voltage (III/3) | 320 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |

Connection data

Connection technology

| | |
|-----------------------|---|
| Type | PCB terminal block can be aligned in rows + fuse terminal block |
| Nominal cross section | 2.5 mm ² |

Conductor connection

| | |
|---|---|
| Connection method | Screw connection with tension sleeve |
| Conductor cross-section rigid | 0.2 mm ² ... 4 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 12 |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, solid | 0.2 mm ² ... 1 mm ² |
| 2 conductors with same cross section, flexible | 0.2 mm ² ... 1 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 0.75 mm ² |

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| | |
|---|---|
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1 mm ² |
| Stripping length | 8 mm |
| Drive form screw head | Slotted (L) |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Mounting

| | |
|---------------|----------------|
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |

Material specifications

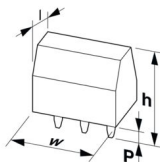
Material data - contact

| | |
|--|--|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Metal surface terminal point (top layer) | Tin (5 - 7 µm Sn) |
| Metal surface soldering area (top layer) | Tin (5 - 7 µm Sn) |

Material data - housing

| | |
|--|--------------|
| Color (Housing) | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V2 |

Dimensions

| | |
|-----------------------|--|
| Dimensional drawing |  |
| Pitch | 5.08 mm |
| Width [w] | 10.16 mm |
| Height [h] | 40.5 mm |
| Length [l] | 27 mm |
| Installed height | 37 mm |
| Solder pin length [P] | 3.5 mm |
| Pin dimensions | 1.1 x 0.8 mm |

PCB design

| | |
|---------------|--------|
| Hole diameter | 1.4 mm |
|---------------|--------|

Electrical tests

Air clearances and creepage distances |

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| | |
|----------------------------------|-------|
| Insulating material group | I |
| Rated insulation voltage (III/3) | 320 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated insulation voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| Rated insulation voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |

Environmental and real-life conditions

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

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1780112>

|  CSA Approval ID: 13631 | | | | |
|--|--------------------------------|--------------------------------|-------------------|-------------------------------|
| | Nominal voltage U _N | Nominal current I _N | Cross section AWG | Cross section mm ² |
| keine | | | | |
| | 300 V | 10 A | 24 - 12 | - |

|  UL Recognized Approval ID: FILE E 60425 | | | | |
|---|--------------------------------|--------------------------------|-------------------|-------------------------------|
| | Nominal voltage U _N | Nominal current I _N | Cross section AWG | Cross section mm ² |
| B | | | | |
| | 250 V | 15 A | 28 - 12 | - |
| D | | | | |
| | 300 V | 10 A | 28 - 12 | - |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27460101 |
| ECLASS-15.0 | 27460101 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002643 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

Environmental product compliance

EU RoHS

| | |
|---|------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c) |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | c52a2d35-ca8f-456f-a351-b8fcf2dec3e6 |

EF3.0 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.157 kg CO2e |
|---------|---------------|