# KDSP 4 - PCB terminal block

1780536

https://www.phoenixcontact.com/pc/products/1780536

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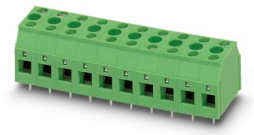


PCB terminal block, nominal current: 41 A, rated voltage (III/2): 320 V, nominal cross section: 4 $mm^2$, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: KDSP 4, pitch: 7.5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 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!

## 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
- Potentials can be easily looped through with additional connection to the PCB
- 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 | 1780536 |
| Packing unit | 50 pc |
| Minimum order quantity | 1 pc |
| Product key | AANFBB |
| Catalog page | Page 127 (C-1-2013) |
| GTIN | 4017918040925 |
| Weight per piece (including packing) | 5.285 g |
| Weight per piece (excluding packing) | 5.045 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

## Technical data

### Product properties

| | |
|---|---|
| Product type | Printed circuit board terminal |
| Product family | KDSP 4 |
| Product line | COMBICON Terminals L |
| Type | PCB terminal block can be aligned in rows+feed-through terminal block |
| Number of positions | 1 |
| Pitch | 7.5 mm |
| Number of connections | 2 |
| Number of rows | 1 |
| Number of potentials | 1 |
| Pin layout | Linear pinning |
| Solder pins per potential | 2 |

Data management status

| | |
|---|---|
| Article revision | 02 |

### Electrical properties

| | |
|---|---|
| Nominal current $I_N$ | 41 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+feed-through terminal block |
| Nominal cross section | 4 mm² |

Conductor connection

| | |
|---|---|
| Connection method | Screw connection with tension sleeve |
| Conductor cross section rigid | 0.2 mm² ... 6 mm² |
| Conductor cross section flexible | 0.2 mm² ... 4 mm² |
| Conductor cross section AWG | 24 ... 10 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 4 mm² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 4 mm² |
| 2 conductors with same cross section, solid | 0.2 mm² ... 1.5 mm² |
| 2 conductors with same cross section, flexible | 0.2 mm² ... 1 mm² |

| | |
|---|---|
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm² ... 1 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 2.5 mm² |
| Stripping length | 8 mm |
| Drive form screw head | Slotted (L) |
| Tightening torque | 0.6 Nm ... 0.8 Nm |

## Mounting

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

## Material specifications

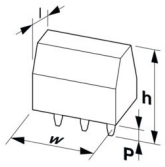
Material data - contact

| | |
|---|---|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface characteristics | Tin-plated |
| 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 | 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 | 7.5 mm |
| Width [w] | 7.5 mm |
| Height [h] | 23 mm |
| Length [l] | 20.6 mm |
| Installed height | 18 mm |
| Solder pin length [P] | 5 mm |

| | |
|---|---|
| Pin dimensions | 0.9 x 0.9 mm |

PCB design

| | |
|---|---|
| Hole diameter | 1.3 mm |

## Electrical tests

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) | 320 V |
| Rated surge voltage (III/3) | 4 kV |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum creepage distance (III/3) | 4 mm |
| Rated insulation voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| minimum clearance value - non-homogenous field (III/2) | 3 mm |
| minimum creepage distance (III/2) | 3 mm |
| Rated insulation voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |
| minimum clearance value - non-homogenous field (II/2) | 3 mm |
| minimum creepage distance (II/2) | 3.2 mm |

## Environmental and real-life conditions

Ambient conditions

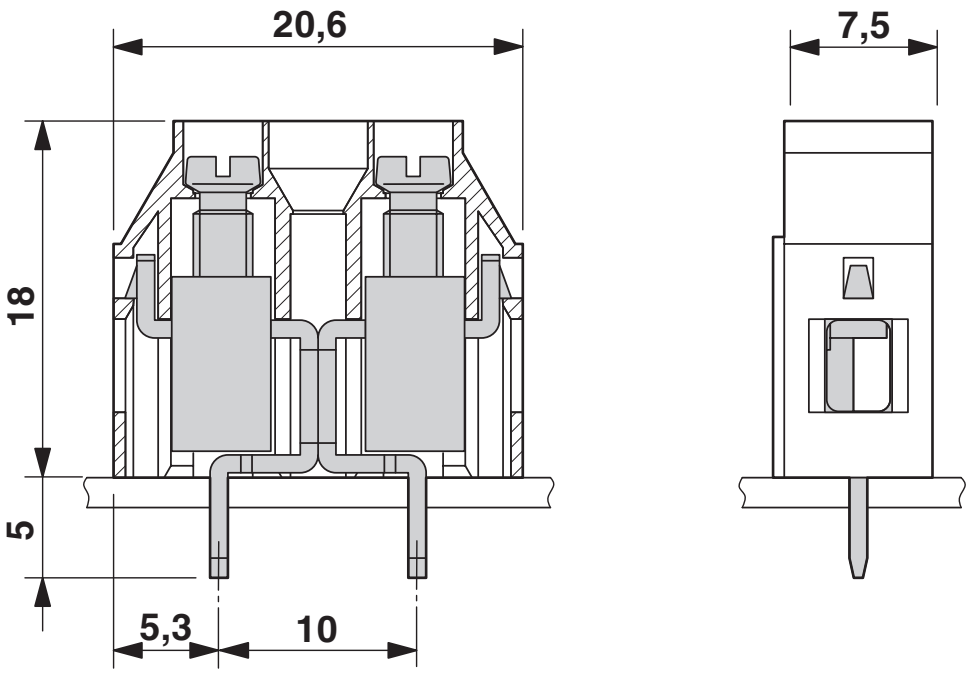
| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

## Packaging specifications

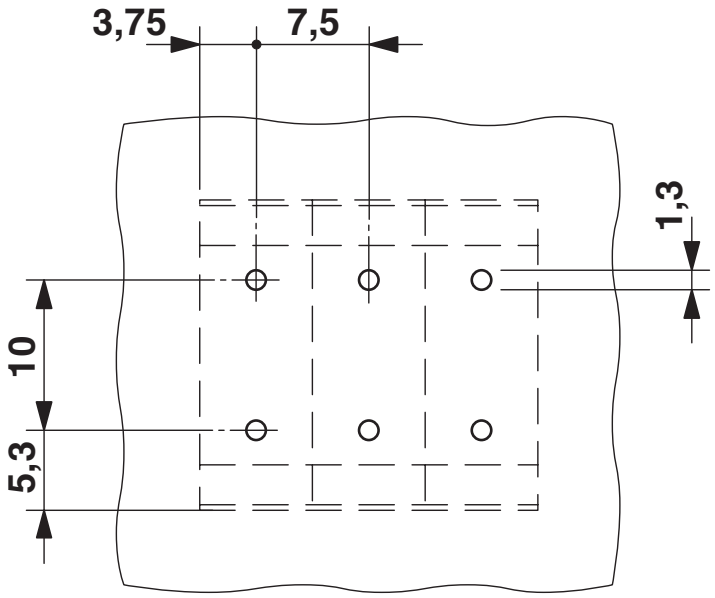
| | |
|---|---|
| Type of packaging | packed in cardboard |

## Drawings

Dimensional drawing




Drilling plan/solder pad geometry



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/1780536

**CSA**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| Use group B | | | | |
| | 300 V | 30 A | 28 - 10 | - |
| Use group D | | | | |
| | 300 V | 10 A | 28 - 10 | - |

**cULus Recognized**
Approval ID: E60425-19770427

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| Use group B | | | | |
| | 300 V | 30 A | 30 - 10 | - |
| Use group D | | | | |
| | 300 V | 10 A | 30 - 10 | - |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 27460101 |
| ECLASS-12.0 | 27460101 |
| ECLASS-13.0 | 27460101 |

### ETIM

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

### UNSPSC

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

## 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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