

ZFKKDS 1,5-5,08 - PCB terminal block

1704402

<https://www.phoenixcontact.com/us/products/1704402>

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The figure shows an 10-position version

PCB terminal block, nominal current: 12 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm², number of potentials: 2, number of rows: 2, number of positions per row: 1, product range: ZFKKDS(A) 1,5, pitch: 5.08 mm, connection method: Spring-cage connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard. Single module for the custom grouping of different numbers of positions. An end terminal block is also needed to terminate the block (see accessories). Blocked items with different numbers of positions are also available.

Your advantages

- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Conductor connection on several levels enables higher contact density
- The latching on the side enables various numbers of positions to be combined

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1704402 |
| Packing unit | 100 pc |
| Minimum order quantity | 100 pc |
| Sales key | AA12 |
| Product key | AALMCA |
| GTIN | 4017918116644 |
| Weight per piece (including packing) | 2.8 g |
| Weight per piece (excluding packing) | 2.537 g |
| Customs tariff number | 85369010 |
| Country of origin | IN |

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Technical data

Product properties

| | |
|---------------------------|----------------------------------|
| Product type | PCB terminal block |
| Product family | ZFKKDS(A) 1,5 |
| Product line | COMBICON Terminals S |
| Type | PC terminal block can be aligned |
| Number of positions | 1 |
| Pitch | 5.08 mm |
| Number of connections | 2 |
| Number of rows | 2 |
| Number of potentials | 2 |
| Pin layout | Linear pinning |
| Solder pins per potential | 1 |

Electrical properties

Properties

| | |
|-----------------------------|-------|
| Nominal current I_N | 12 A |
| Nominal voltage U_N | 400 V |
| Rated voltage (III/3) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated voltage (III/2) | 400 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 | PC terminal block can be aligned |
| Nominal cross section | 1.5 mm ² |

Conductor connection

| | |
|---|--|
| Connection method | Spring-cage connection |
| Conductor cross-section rigid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 1.5 mm ² |
| Conductor cross-section AWG | 24 ... 14 |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| Stripping length | 7.5 mm |

Mounting

| | |
|---------------|----------------|
| Mounting type | Wave soldering |
|---------------|----------------|

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| | |
|------------|----------------|
| 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 | hot-dip tin-plated |
| Metal surface terminal point (top layer) | Tin (10 µm - 16 µm Sn) |
| Metal surface soldering area (top layer) | Tin (10 µm - 16 µm Sn) |

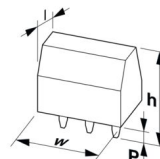
Material data - housing

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

Material data – actuating element

| | |
|---------------------------|--------------|
| Color (Actuating element) | green (6021) |
|---------------------------|--------------|

Dimensions

| | |
|-----------------------|--|
| Dimensional drawing |  |
| Pitch | 5.08 mm |
| Width [w] | 5.08 mm |
| Height [h] | 29 mm |
| Length [l] | 24 mm |
| Installed height | 25.5 mm |
| Solder pin length [P] | 3.5 mm |
| Pin dimensions | 0.7 x 1 mm |

PCB design

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

Electrical tests

Air clearances and creepage distances |

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| | |
|--|---------------------|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum creepage distance (III/3) | 3.2 mm |
| Rated insulation voltage (III/2) | 400 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 (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |

Packaging specifications

| | |
|-------------------|--|
| Type of packaging | packed in cardboard |
| Note | The item is preassembled at the factory into 10-pos. blocks. For smaller numbers of positions, the washers must be removed by the customer |

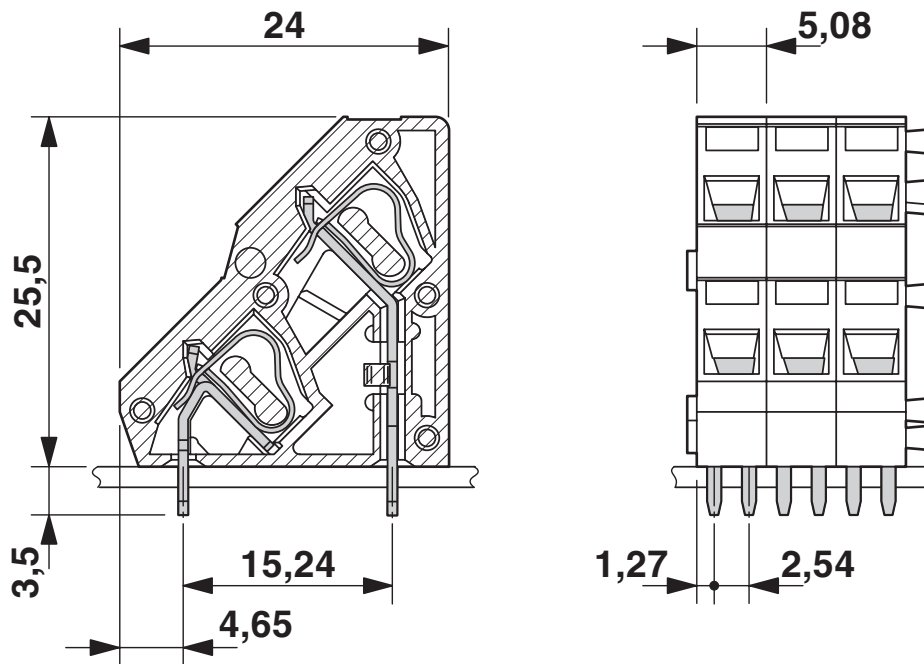
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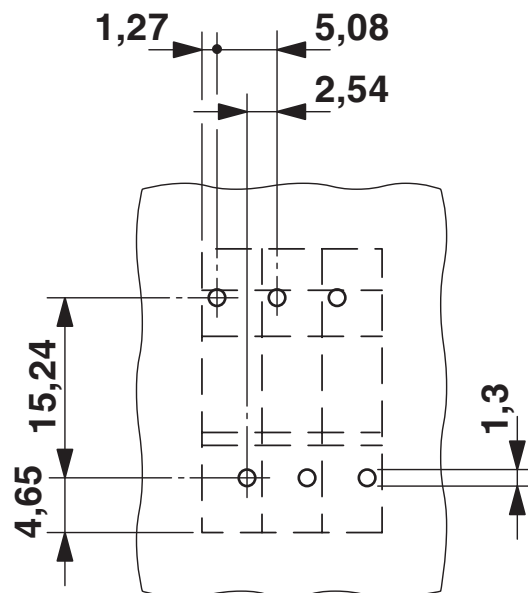
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Drawings

Dimensional drawing



Drilling plan/solder pad geometry



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1704402>

|  CSA Approval ID: 13631 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 300 V | 10 A | 28 - 12 | - |
| D | 300 V | 10 A | 28 - 12 | - |

|  cULus Recognized Approval ID: E60425-19941111 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 250 V | 10 A | 26 - 12 | - |
| D | 300 V | 10 A | 26 - 12 | - |

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Classifications

ECLASS

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

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002643 |
|-----------|----------|

UNSPSC

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

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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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