

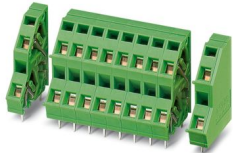
# ZFKKDSA 1,5C-5,0- 4 GY - PCB terminal block



1989117

<https://www.phoenixcontact.com/us/products/1989117>

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Printed circuit board terminal, nominal current: 16 A, rated voltage (III/2): 400 V, nominal cross section: 1.5 mm<sup>2</sup>, number of potentials: 8, number of rows: 2, number of positions per row: 4, product range: ZFKKDS(A) 1,5C, pitch: 5 mm, connection method: Spring-cage connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: gray, Pin layout: Linear pinning, Solder pin [P]: 3.7 mm, number of solder pins per potential: 1, type of packaging: packed in cardboard

## 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                          | 1989117                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA12                           |
| Product key                          | AALMCB                         |
| GTIN                                 | 4017918938833                  |
| Weight per piece (including packing) | 11.08 g                        |
| Weight per piece (excluding packing) | 10.286 g                       |
| Customs tariff number                | 85369010                       |
| Country of origin                    | IN                             |

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## Technical data

### Product properties

|                           |                                |
|---------------------------|--------------------------------|
| Product type              | Printed circuit board terminal |
| Product family            | ZFKKDS(A) 1,5C                 |
| Product line              | COMBICON Terminals S           |
| Number of positions       | 4                              |
| Pitch                     | 5 mm                           |
| Number of connections     | 8                              |
| Number of rows            | 2                              |
| Number of potentials      | 8                              |
| Pin layout                | Linear pinning                 |
| Solder pins per potential | 1                              |

### Electrical properties

#### Properties

|                             |       |
|-----------------------------|-------|
| Nominal current $I_N$       | 16 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 <sup>2</sup>              |

#### Conductor connection

|   |  |
|---|--|
| Connection method   | Spring-cage connection                       |
| Conductor cross section rigid   | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section flexible                                      | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Conductor cross section AWG   | 24 ... 14                                    |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Stripping length  | 7 mm   |

### Mounting

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

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## 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 (10 - 16 µm Sn)  |
| Metal surface soldering area (top layer) | Tin (10 - 16 µm Sn)  |

### Material data - housing

|   |             |
|---|-------------|
| Color (Housing)   | gray (7042) |
| 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) | gray (7042) |
|---------------------------|-------------|

## Dimensions

|                       |              |
|-----------------------|--------------|
| Dimensional drawing   |              |
| Pitch                 | 5 mm         |
| Width [w]             | 21 mm        |
| Height [h]            | 29.7 mm      |
| Length [l]            | 20.97 mm     |
| Installed height      | 26 mm        |
| Solder pin length [P] | 3.7 mm       |
| Pin dimensions        | 0.7 x 0.7 mm |

### PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.1 mm |
|---------------|--------|

## Electrical tests

### Air clearances and creepage distances |

|                           |   |
|---------------------------|---|
| Insulating material group | I |
|---------------------------|---|

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|                                  |       |
|----------------------------------|-------|
| Rated insulation voltage (III/3) | 250 V |
| Rated surge voltage (III/3)      | 4 kV  |
| Rated insulation voltage (III/2) | 400 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/1989117>

|  <b>cULus Recognized</b><br>Approval ID: E60425-19941111 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Use group B   | 250 V                 | 10 A                  | 26 - 12           | -                           |
| Use group D   | 300 V                 | 10 A                  | 26 - 12           | -                           |

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## Classifications

### ECLASS

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

### ETIM

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