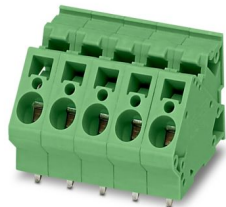


# ZFKDSA 4-10-7,5-8 - PCB terminal block

1709150

<https://www.phoenixcontact.com/us/products/1709150>

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The figure shows a 5-pos. version of the product

PCB terminal block, nominal current: 32 A, rated voltage (III/2): 630 V, nominal cross section: 4 mm<sup>2</sup>, number of potentials: 8, number of rows: 1, number of positions per row: 8, product range: ZFKDS(A) 4, pitch: 7.5 mm, connection method: Spring-cage connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 4.6 mm, number of solder pins per potential: 2, 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
- Separate bridge shaft for easily connecting multiple positions to jumpers
- Quick and convenient testing using integrated test option

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1709150       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Product key                          | AANMAA        |
| GTIN                                 | 4055626052854 |
| Weight per piece (including packing) | 41.42 g       |
| Weight per piece (excluding packing) | 39.62 g       |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                           |                                  |
|---------------------------|----------------------------------|
| Product type              | PCB terminal block               |
| Product family            | ZFKDS(A) 4                       |
| Product line              | COMBICON Terminals L             |
| Type                      | PC terminal block can be aligned |
| Number of positions       | 8                                |
| Pitch                     | 7.5 mm                           |
| Number of connections     | 8                                |
| Number of rows            | 1                                |
| Number of potentials      | 8                                |
| Pin layout                | Linear pinning                   |
| Solder pins per potential | 2                                |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 32 A   |
| Nominal voltage $U_N$       | 630 V  |
| Rated voltage (III/3)       | 500 V  |
| Rated surge voltage (III/3) | 6 kV   |
| Rated voltage (III/2)       | 630 V  |
| Rated surge voltage (III/2) | 6 kV   |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (II/2)  | 6 kV   |

### Connection data

#### Connection technology

|                       |                                  |
|-----------------------|----------------------------------|
| Type                  | PC terminal block can be aligned |
| Nominal cross section | 4 mm <sup>2</sup>                |

#### Conductor connection

|   |  |
|---|--|
| Connection method   | Spring-cage connection                     |
| Conductor cross-section rigid   | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Conductor cross-section flexible  | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>  |
| Conductor cross-section AWG   | 24 ... 10                                  |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve    | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| Stripping length  | 10 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                  | 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                 | 7.5 mm     |
| Width [w]             | 81.5 mm    |
| Height [h]            | 27.6 mm    |
| Length [l]            | 29 mm      |
| Installed height      | 23 mm      |
| Solder pin length [P] | 4.6 mm     |
| Pin dimensions        | 1 x 1.4 mm |

### PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.8 mm |
|---------------|--------|

## Mechanical tests

### Connection test

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|               |                       |
|---------------|-----------------------|
| Specification | IEC 60998-2-2:1991-10 |
| Result        | Test passed           |

## Test for conductor damage and slackening

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60998-2-2:1991-10 |
| Result        | Test passed           |

## Pull-out test

|   |   |
|---|---|
| Specification   | IEC 60998-2-2:1991-10                   |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|   | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|   | 6 mm <sup>2</sup> / solid / > 80 N      |
|   | 4 mm <sup>2</sup> / flexible / > 60 N   |

## Electrical tests

### Temperature-rise test

|                                   |                                |
|-----------------------------------|--------------------------------|
| Specification                     | IEC 60998-2-1:1990-04          |
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |

### Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60998-2-2:1991-10 |
| Insulation resistance, neighboring positions | 10 <sup>9</sup> Ω     |

### Air clearances and creepage distances |

|                                  |        |
|----------------------------------|--------|
| Insulating material group        | I      |
| Rated insulation voltage (III/3) | 500 V  |
| Rated surge voltage (III/3)      | 6 kV   |
| Rated insulation voltage (III/2) | 630 V  |
| Rated surge voltage (III/2)      | 6 kV   |
| Rated insulation voltage (II/2)  | 1000 V |
| Rated surge voltage (II/2)       | 6 kV   |

## Environmental and real-life conditions

### Vibration test

|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:1995-03       |
| Frequency              | 10 - 150 - 10 Hz            |
| Sweep speed            | 1 octave/min                |
| Amplitude              | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration           | 5g (60.1 Hz ... 150 Hz)     |
| Test duration per axis | 2.5 h                       |
| Test directions        | X-, Y- and Z-axis           |

### Glow-wire test

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60998-2-2:1991-10 |
| Temperature   | 850 °C                |

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|                  |     |
|------------------|-----|
| Time of exposure | 5 s |
|------------------|-----|

## 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 |
|-------------------|---------------------|

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## Drawings

Diagram



Type: ZFKDS 4-7,5 and ZFKDSA 4-9

Test following DIN EN 60512-5-2:2003-01

Reduction factor = 1

No. of positions: 5

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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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.198 kg CO2e |
|---------|---------------|

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