

# FFKDSA1/V-6,35 - PCB terminal block



1789621  
<https://www.phoenixcontact.com/us/products/1789621>

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PCB terminal block, nominal current: 12 A, rated voltage (III/2): 160 V, nominal cross section: 1 mm<sup>2</sup>, number of potentials: 1, number of rows: 1, number of positions per row: 1, product range: FFKDS(A) 1,5/..-V, pitch: 3.81 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 90 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.4 mm, number of solder pins per potential: 2, type of packaging: packed in cardboard. End terminal block for terminating custom-grouped blocks.

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive operation due to color-coded actuating push button
- Operation and conductor connection from one direction enable integration into front of device
- Two solder pins reduce the mechanical strain on the soldering spots
- The latching on the side enables various numbers of positions to be combined
- Vertical connection enables multi-row arrangement on the PCB

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1789621             |
| Packing unit                         | 50 pc               |
| Minimum order quantity               | 50 pc               |
| Sales key                            | AA12                |
| Product key                          | AALBAF              |
| Catalog page                         | Page 147 (C-1-2013) |
| GTIN                                 | 4017918044091       |
| Weight per piece (including packing) | 1.268 g             |
| Weight per piece (excluding packing) | 1.023 g             |
| Customs tariff number                | 85369010            |
| Country of origin                    | GR                  |

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## Technical data

### Product properties

|                           |                                |
|---------------------------|--------------------------------|
| Product type              | Printed circuit board terminal |
| Product family            | FFKDS(A) 1,5/..-V              |
| Product line              | COMBICON Terminals S           |
| Type                      | End terminal                   |
| Number of positions       | 1                              |
| Pitch                     | 3.81 mm                        |
| Number of connections     | 1                              |
| Number of rows            | 1                              |
| Number of potentials      | 1                              |
| Pin layout                | Linear pinning                 |
| Solder pins per potential | 2                              |

### Electrical properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 12 A   |
| Nominal voltage $U_N$       | 160 V  |
| Degree of pollution         | 3      |
| Rated voltage (III/3)       | 160 V  |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated voltage (III/2)       | 160 V  |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated voltage (II/2)        | 320 V  |
| Rated surge voltage (II/2)  | 2.5 kV |

### Connection data

#### Connection technology

|                       |                                  |
|-----------------------|----------------------------------|
| Type                  | PC terminal block can be aligned |
| Nominal cross section | 1 mm <sup>2</sup>                |

#### Conductor connection

|                                                                       |                                               |
|-----------------------------------------------------------------------|-----------------------------------------------|
| Connection method                                                     | Push-in spring connection                     |
| Conductor cross section rigid                                         | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup>    |
| Conductor cross section flexible                                      | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup>    |
| Conductor cross section AWG                                           | 26 ... 18                                     |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve  | 0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup> |
| Stripping length                                                      | 10 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 (5 - 7 µm Sn)                                                                |
| Metal surface terminal point (middle layer) | Nickel (2 - 3 µm Ni)                                                             |
| Metal surface soldering area (top layer)    | Tin (5 - 7 µm Sn)                                                                |
| Metal surface soldering area (middle layer) | Nickel (2 - 3 µm Ni)                                                             |

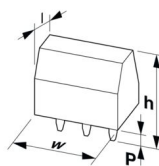
### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| 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)                                         | orange (2003) |
| 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               | 3.81 mm                                                                              |
| Width [w]           | 6.35 mm                                                                              |
| Height [h]          | 17.1 mm                                                                              |

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|                       |            |
|-----------------------|------------|
| Length [l]            | 12.7 mm    |
| Installed height      | 13.7 mm    |
| Solder pin length [P] | 3.4 mm     |
| Pin dimensions        | 0.5 x 1 mm |

## PCB design

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

## Electrical tests

### Air clearances and creepage distances |

|                                                        |                                               |
|--------------------------------------------------------|-----------------------------------------------|
| Specification                                          | IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09 |
| Insulating material group                              | I                                             |
| Comparative tracking index (IEC 60112)                 | CTI 600                                       |
| Rated insulation voltage (III/3)                       | 160 V                                         |
| Rated surge voltage (III/3)                            | 2.5 kV                                        |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm                                        |
| minimum creepage distance (III/3)                      | 2 mm                                          |
| Rated insulation voltage (III/2)                       | 160 V                                         |
| Rated surge voltage (III/2)                            | 2.5 kV                                        |
| minimum clearance value - non-homogenous field (III/2) | 1.5 mm                                        |
| minimum creepage distance (III/2)                      | 1.5 mm                                        |
| Rated insulation voltage (II/2)                        | 320 V                                         |
| Rated surge voltage (II/2)                             | 2.5 kV                                        |
| minimum clearance value - non-homogenous field (II/2)  | 1.5 mm                                        |
| minimum creepage distance (II/2)                       | 1.6 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 |
|-------------------|---------------------|

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