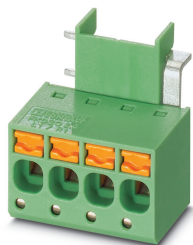


# PCB terminal block - FKDSO 2,5/ 2-L1 - 1857811

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PCB terminal block, nominal current: 20 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, Number of potentials: 2, Number of rows: 1, Number of positions per row: 2, product range: FKDSO 2,5/ ..-L1, pitch: 5 mm, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 3.5 mm, type of packaging: packed in cardboard


The figure shows the 4-pos. version of the product

## Your advantages

- ✓ Orthogonal alignment of the terminal block with the PCB for optimum accessibility in DIN-rail-mounted devices
- ✓ Time saving push-in connection, tools not required
- ✓ Intuitive use through colour coded actuation lever



## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 50 pc   |
| GTIN         | <br>4 055626 268330 |
| GTIN         | 4055626268330   |

## Technical data

### Item properties

|                           |                    |
|---------------------------|--------------------|
| Brief article description | PCB terminal block |
| Range of articles         | FKDSO 2,5/ ..-L1   |
| Pitch                     | 5 mm               |
| Number of positions       | 2                  |
| Mounting type             | Wave soldering     |
| Pin layout                | Linear pinning     |
| Number of levels          | 1                  |
| Number of connections     | 2                  |
| Number of potentials      | 2                  |

### Electrical parameters

|                 |      |
|-----------------|------|
| Nominal current | 20 A |
|-----------------|------|

# PCB terminal block - FKDSO 2,5/ 2-L1 - 1857811

## Technical data

### Electrical parameters

|                             |                                   |
|-----------------------------|-----------------------------------|
| Nom. voltage                | 320 V                             |
| Contact resistance          | Test passed IEC 60512-2-1:2002-02 |
| Rated voltage (III/3)       | 200 V                             |
| Rated voltage (III/2)       | 320 V                             |
| Rated voltage (II/2)        | 320 V                             |
| Rated surge voltage (III/3) | 4 kV                              |
| Rated surge voltage (III/2) | 4 kV                              |
| Rated surge voltage (II/2)  | 4 kV                              |

### Connection capacity

|   |  |
|---|--|
| Connection method   | Push-in spring connection                    |
| Conductor cross section solid   | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| Conductor cross section flexible  | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>    |
| Conductor cross section AWG / kcmil   | 24 ... 12                                    |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>    |
| Stripping length  | 10 mm  |

### 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

|  |              |
|--|--------------|
| Housing color                          | green (6021) |
| Insulating material                    | PA           |
| Insulating material group              | I            |
| CTI according to IEC 60112             | 600          |
| Flammability rating according to UL 94 | V0           |

### Dimensions for the product

|                             |  |
|-----------------------------|--|
| Caption                     | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ]                | 18.8 mm  |
| Width [ w ]                 | 10.6 mm  |
| Height [ h ]                | 19.4 mm  |
| Pitch                       | 5 mm   |
| Height (without solder pin) | 15.9 mm  |
| Solder pin [P]              | 3.5 mm   |

# PCB terminal block - FKDSO 2,5/ 2-L1 - 1857811

## Technical data

### Dimensions for the product

|                |            |
|----------------|------------|
| Pin spacing    | 5 mm       |
| Pin dimensions | 0.8 x 1 mm |

### Dimensions for PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.4 mm |
| Pin spacing   | 5 mm   |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

### Processing notes

|               |                                  |
|---------------|----------------------------------|
| Process       | Wave soldering                   |
| Specification | Following IEC 61760-1:2006-04    |
|               | Following IEC 60068-2-54:2006-04 |

### Ambient conditions

|   |   |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C  |
| Ambient temperature (assembly)          | -25 °C ... 105 °C   |
| Ambient temperature (operation)         | -40 °C ... 100 °C (Depending on the current carrying capacity/derating curve) |

### Termination and connection method

|  |                     |
|--|---------------------|
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
|  | Test passed         |

### Pull-out test

|  |   |
|--|---|
| Pull-out test  | IEC 60999-1:1999-11                     |
| Conductor cross section / conductor type / tensile force | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|  | 2.5 mm <sup>2</sup> / solid / > 50 N    |
|  | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|  | 4 mm <sup>2</sup> / flexible / > 60 N   |

### Mechanical tests according to standard

|                    |               |
|--------------------|---------------|
| Test specification | IEC 60947-7-4 |
|--------------------|---------------|

### Electrical tests

|                             |                   |
|-----------------------------|-------------------|
| Rated current               | 20 A              |
| Conductor cross section     | 4 mm <sup>2</sup> |
| Rated voltage (III/2)       | 320 V             |
| Rated surge voltage (III/2) | 4 kV              |

### Air clearances and creepage distances

|                                   |                     |
|-----------------------------------|---------------------|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification                     | IEC 60664-1:2007-04 |

# PCB terminal block - FKDSO 2,5/ 2-L1 - 1857811

## Technical data

### Air clearances and creepage distances

|   |        |
|---|--------|
| Minimum clearance - inhomogeneous field (III/3) | 3 mm   |
| Minimum clearance - inhomogeneous field (III/2) | 3 mm   |
| Minimum clearance - inhomogeneous field (II/2)  | 3 mm   |
| Minimum creepage distance value (III/3)         | 3.2 mm |
| Minimum creepage distance value (III/2)         | 3.2 mm |
| Minimum creepage distance value (II/2)          | 3.2 mm |

### Temperature-rise test

|                                   |  |
|-----------------------------------|--|
| Specification                     | IEC 60947-7-4:2013-08  |
| Requirement temperature-rise test | The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature. |

### Current carrying capacity / derating curves

|         |   |
|---------|---|
| Caption | Type: FKDSO 2,5/...-R(L)1<br>Tested according to DIN EN 60512-5-2:2003-01<br>Reduction factor = 1<br>Number of positions: 4 |
|---------|---|

### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:2007-12  |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Acceleration           | 5 g (60.1 - 150 Hz)    |
| Test duration per axis | 2.5 h                  |

### Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Result                                       | Test passed           |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### Glow-wire test

|                  |                        |
|------------------|------------------------|
| Specification    | IEC 60695-2-10:2000-10 |
| Temperature      | 850 °C                 |
| Time of exposure | 5 s                    |

### Alternating climate test

|               |                  |
|---------------|------------------|
| Result        | Test passed      |
| Specification | ISO 6988:1985-02 |

### Standards and Regulations

|  |        |
|--|--------|
| Connection in acc. with standard       | EN-VDE |
| Flammability rating according to UL 94 | V0     |

### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|------------|---|

# PCB terminal block - FKDSO 2,5/ 2-L1 - 1857811

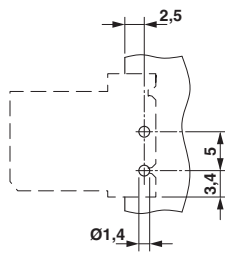
## Technical data

### Environmental Product Compliance

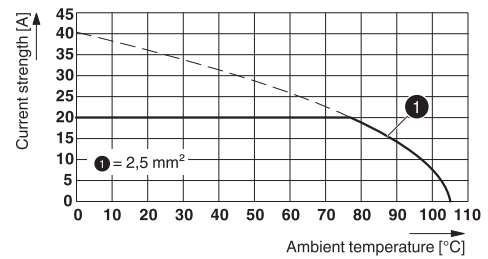
|  |  |
|--|--|
|  | No hazardous substances above threshold values |
|--|--|

## Drawings

Drilling diagram

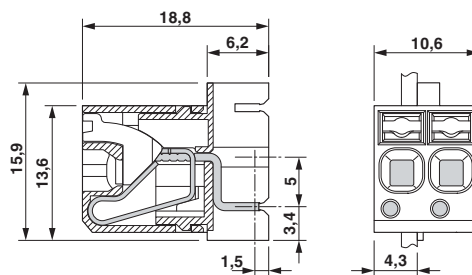


Diagram



Type: FKDSO 2,5/...-R(L)1  
 Tested according to DIN EN 60512-5-2:2003-01  
 Reduction factor = 1  
 Number of positions: 4

Dimensional drawing



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 11.0   | 27460101 |
| eCl@ss 4.0    | 27180400 |
| eCl@ss 4.1    | 27180400 |
| eCl@ss 5.0    | 27180500 |
| eCl@ss 5.1    | 27261100 |
| eCl@ss 6.0    | 27261100 |
| eCl@ss 7.0    | 27440401 |
| eCl@ss 9.0    | 27440401 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001031 |
|----------|----------|

# PCB terminal block - FKDSO 2,5/ 2-L1 - 1857811

## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001031 |
| ETIM 4.0 | EC002643 |
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31261501 |
| UNSPSC 7.0901 | 31261501 |
| UNSPSC 11     | 31261501 |
| UNSPSC 12.01  | 31261501 |
| UNSPSC 13.2   | 39121432 |
| UNSPSC 18.0   | 39121432 |
| UNSPSC 19.0   | 39121432 |
| UNSPSC 20.0   | 39121432 |
| UNSPSC 21.0   | 39121432 |

## Approvals


### Approvals


#### Approvals

VDE Zeichengenehmigung / IECCEB Scheme / EAC / cULus Recognized

#### Ex Approvals

### Approval details

|                            |   |   |          |
|----------------------------|---|---|----------|
| VDE Zeichengenehmigung     |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40043675 |
| Nominal voltage UN         | 320 V   |   |          |
| Nominal current IN         | 20 A  |   |          |
| mm <sup>2</sup> /AWG/kcmil | 0.2-4   |   |          |

|                    |   |   |           |
|--------------------|---|---|-----------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-56776 |
| Nominal voltage UN | 320 V   |   |           |

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## Approvals

|                            |       |
|----------------------------|-------|
|                            |       |
| Nominal current IN         | 20 A  |
| mm <sup>2</sup> /AWG/kcmil | 0.2-4 |

|     |  |         |
|-----|--|---------|
| EAC |  | B.01687 |
|-----|--|---------|

|                            |       |   |                 |
|----------------------------|-------|---|-----------------|
| cULus Recognized           |       | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E60425-20110930 |
|                            | B     | D   |                 |
| Nominal voltage UN         | 300 V | 150 V   |                 |
| Nominal current IN         | 20 A  | 15 A  |                 |
| mm <sup>2</sup> /AWG/kcmil | 24-12 | 24-12   |                 |

## Accessories

### Accessories

#### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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