

## PCB terminal block - FFKDSA1/V-2,54-16 - 1789074

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PCB terminal block, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, pitch: 2.54 mm, number of positions: 16, connection method: Push-in spring connection, mounting: Wave soldering, conductor/PCB connection direction: 90 °, color: green, Pin layout: Linear double pinning, Solder pin [P]: 3.4 mm. The article can be aligned to create different nos. of positions!

The figure shows the 10-position version

### Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Intuitive use through colour coded actuation lever
- ✓ 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



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 10 pc                                                                                                   |
| GTIN         | <br>4 017918 904401 |
| GTIN         | 4017918904401                                                                                           |

### Technical data

#### Item properties

|                           |                           |
|---------------------------|---------------------------|
| Brief article description | PCB terminal block        |
| Range of articles         | FFKDS(A) 0,5/..-V         |
| Pitch                     | 2.54 mm                   |
| Number of positions       | 16                        |
| Connection method         | Push-in spring connection |
| Mounting type             | Wave soldering            |
| Pin layout                | Linear double pinning     |
| Number of levels          | 1                         |

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## Technical data

### Item properties

|                       |    |
|-----------------------|----|
| Number of connections | 16 |
| Number of potentials  | 16 |

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 6 A    |
| Nom. voltage                | 160 V  |
| Rated voltage               | 63 V   |
| Rated voltage (III/2)       | 160 V  |
| Rated voltage (II/2)        | 320 V  |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2)  | 2.5 kV |

### Connection capacity

|                                     |                           |
|-------------------------------------|---------------------------|
| Connection method                   | Push-in spring connection |
| pluggable                           | Yes                       |
| Conductor cross section solid       | 0.14 mm² ... 0.5 mm²      |
| Conductor cross section flexible    | 0.14 mm² ... 0.5 mm²      |
| Conductor cross section AWG / kcmil | 26 ... 20                 |
| Stripping length                    | 11 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 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

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Housing color                                                     | 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       |

### Dimensions for the product

|              |          |
|--------------|----------|
| Length [ l ] | 12.6 mm  |
| Width [ w ]  | 43.14 mm |

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## Technical data

### Dimensions for the product

|                             |              |
|-----------------------------|--------------|
| Height [ h ]                | 17 mm        |
| Pitch                       | 2.54 mm      |
| Height (without solder pin) | 13.6 mm      |
| Solder pin [P]              | 3.4 mm       |
| Pin spacing                 | 5.08 mm      |
| Pin dimensions              | 0.5 x 0.8 mm |

### Dimensions for PCB design

|               |         |
|---------------|---------|
| Hole diameter | 1.1 mm  |
| Pin spacing   | 5.08 mm |

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 10                  |
| Denomination packing units | Pcs.                |

### Ambient conditions

|                                         |                                                                               |
|-----------------------------------------|-------------------------------------------------------------------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                                              |
| Ambient temperature (assembly)          | -5 °C ... 100 °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 60999-1:1990-05 |
|                                          | Test passed         |

### Pull-out test

|                                                          |                             |
|----------------------------------------------------------|-----------------------------|
| Pull-out test                                            | IEC 60999-1:1990-05         |
|                                                          | Test passed                 |
| Conductor cross section / conductor type / tensile force | 0.14 mm² / solid / > 7 N    |
|                                                          | 0.14 mm² / flexible / > 7 N |
|                                                          | 0.5 mm² / solid / > 30 N    |
|                                                          | 0.5 mm² / flexible / > 30 N |

### Mechanical tests according to standard

|                    |                        |
|--------------------|------------------------|
| Test specification | IEC 60999-1 (in parts) |
|--------------------|------------------------|

### Electrical tests

|                             |         |
|-----------------------------|---------|
| Rated current               | 6 A     |
| Conductor cross section     | 0.5 mm² |
| Rated voltage (III/2)       | 160 V   |
| Rated surge voltage (III/2) | 2.5 kV  |

### Air clearances and creepage distances

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

## PCB terminal block - FFKDSA1/V-2,54-16 - 1789074

### Technical data

#### Air clearances and creepage distances

|                                                 |        |
|-------------------------------------------------|--------|
| Minimum clearance - inhomogeneous field (III/3) | 1.5 mm |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm |
| Minimum clearance - inhomogeneous field (II/2)  | 1.5 mm |
| Minimum creepage distance value (III/3)         | 1.6 mm |
| Minimum creepage distance value (III/2)         | 1.5 mm |
| Minimum creepage distance value (II/2)          | 1.6 mm |

#### Temperature-rise test

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Specification                     | IEC 60998-1:1990-04                 |
| Result                            | Test passed                         |
| Requirement temperature-rise test | Increase in temperature $\leq 45$ K |

#### Current carrying capacity / derating curves

|                     |                                                                                                                      |
|---------------------|----------------------------------------------------------------------------------------------------------------------|
| Caption             | Type: FFKDS/V-2,54<br>Tested according to DIN EN 60512-5-2:2003-01<br>Reduction factor = 1<br>Number of positions: 5 |
| Specification       | Following IEC 60512-5-2:2002-02                                                                                      |
| Number of positions | 5                                                                                                                    |
| Reduction factor    | 1                                                                                                                    |

#### Vibration test

|                        |                                 |
|------------------------|---------------------------------|
| Specification          | IEC 60068-2-6:1982 + AMD 2:1985 |
| Result                 | Test passed                     |
| 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 60512-2:1985-00 |
| Result                                       | Test passed         |
| Insulation resistance, neighboring positions | $10^{12} \Omega$    |

#### Standards and Regulations

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

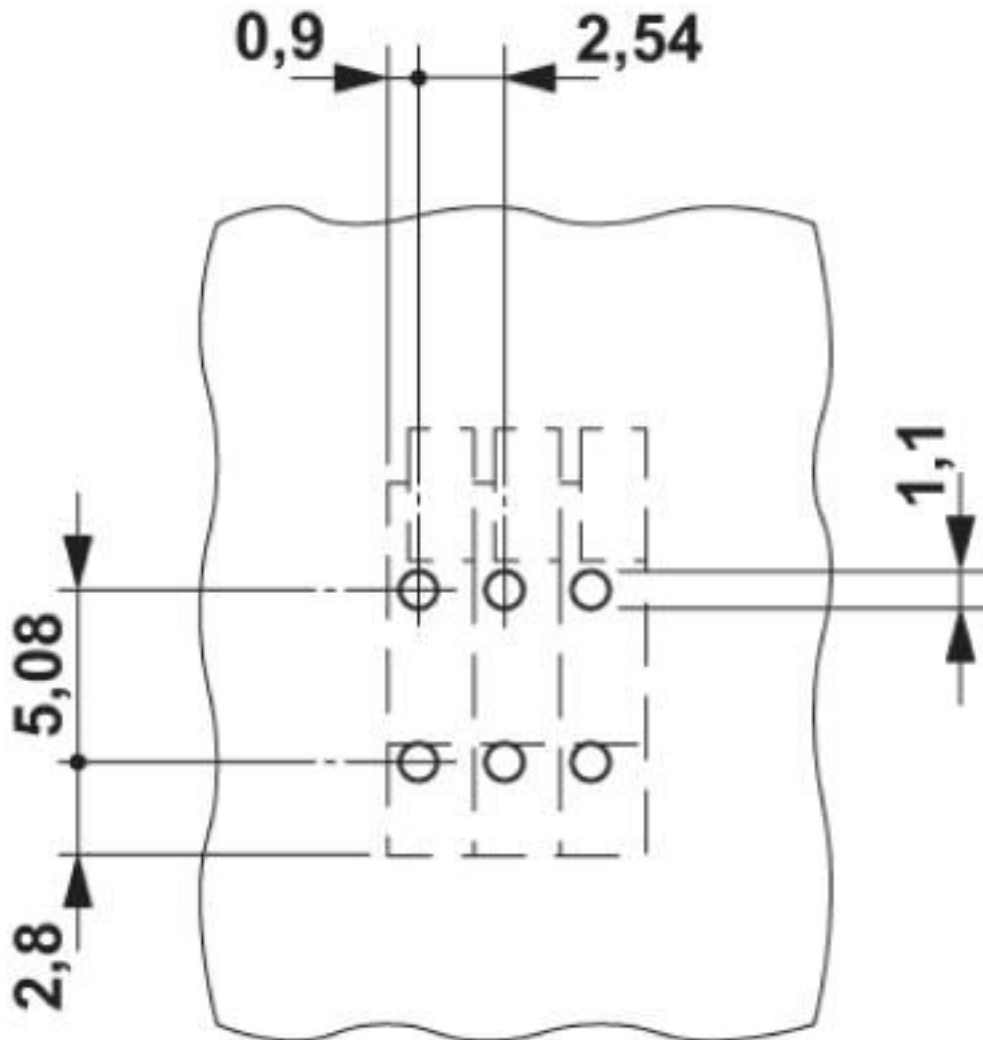
#### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Drawings

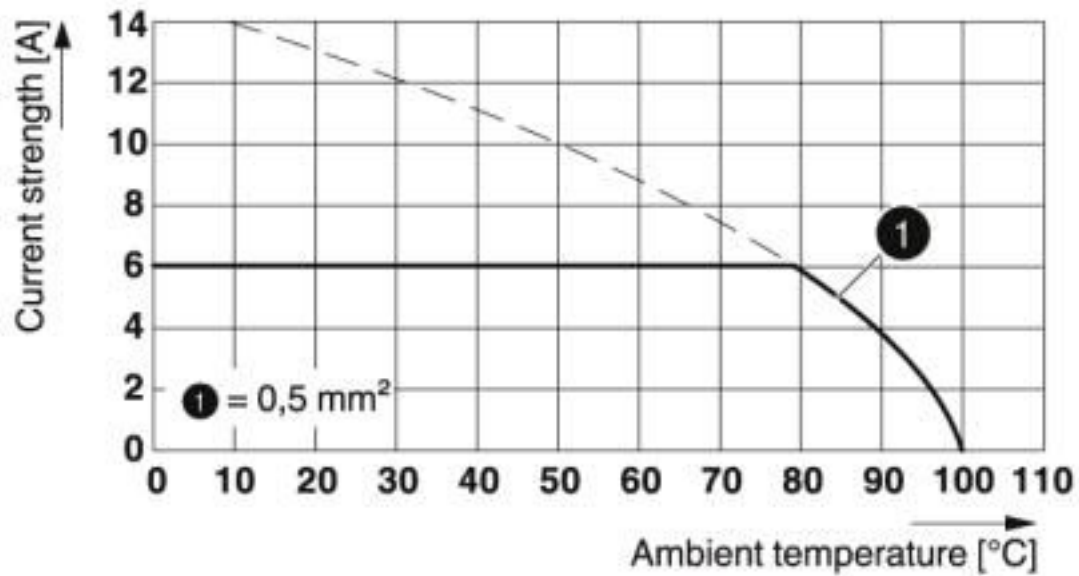
## PCB terminal block - FFKDSA1/V-2,54-16 - 1789074

Drilling diagram



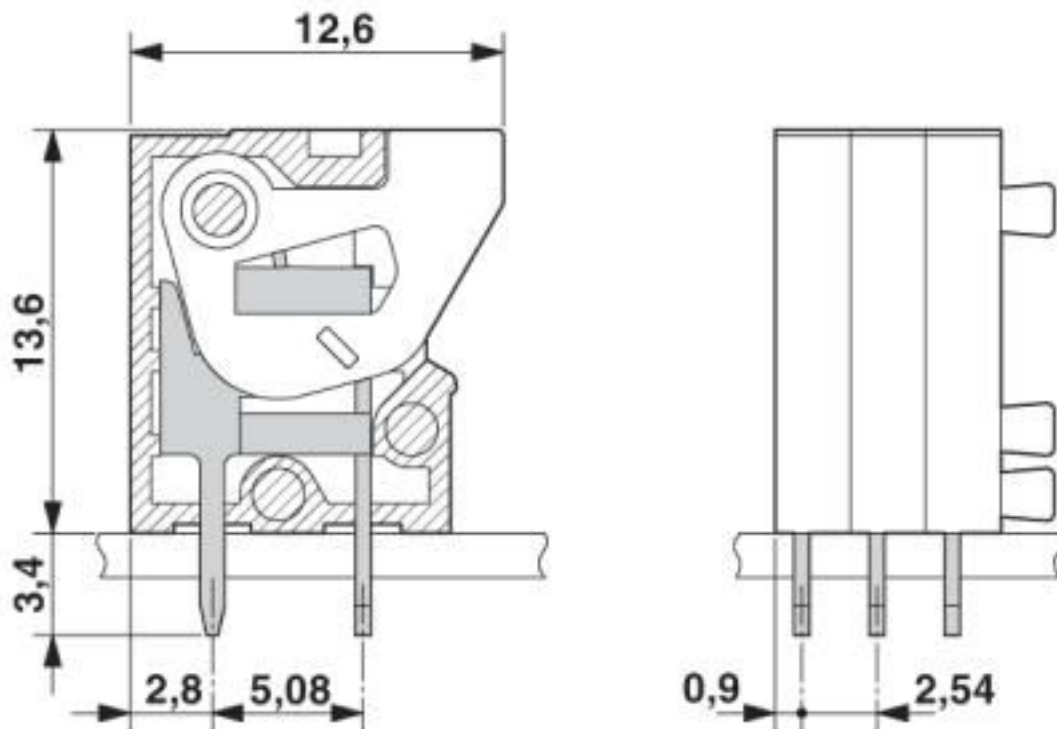
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Diagram



Type: FFKDS/V-2,54  
 Tested according to DIN EN 60512-5-2:2003-01  
 Reduction factor = 1  
 Number of positions: 5

Dimensional drawing



## PCB terminal block - FFKDSA1/V-2,54-16 - 1789074

### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440401 |
| eCl@ss 4.0    | 27141100 |
| eCl@ss 4.1    | 27141100 |
| eCl@ss 5.0    | 27141100 |
| eCl@ss 5.1    | 27261100 |
| eCl@ss 6.0    | 27261100 |
| eCl@ss 7.0    | 27440401 |
| eCl@ss 8.0    | 27440401 |
| eCl@ss 9.0    | 27440401 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002643 |
| ETIM 6.0 | EC002643 |
| ETIM 7.0 | EC002643 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211801 |
| UNSPSC 7.0901 | 39121432 |
| UNSPSC 11     | 39121432 |
| UNSPSC 12.01  | 39121432 |
| UNSPSC 13.2   | 39121432 |
| UNSPSC 18.0   | 39121432 |
| UNSPSC 19.0   | 39121432 |
| UNSPSC 20.0   | 39121432 |
| UNSPSC 21.0   | 39121432 |

### Approvals

#### Approvals

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Approvals

CSA / EAC / cULus Recognized

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Ex Approvals

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#### Approval details

## PCB terminal block - FFKDSA1/V-2,54-16 - 1789074

### Approvals

|                    |                                                                                   |                                                                                                                                         |       |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|
| CSA                |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
|                    |                                                                                   | B                                                                                                                                       |       |
| Nominal voltage UN |                                                                                   | 150 V                                                                                                                                   |       |
| Nominal current IN |                                                                                   | 6 A                                                                                                                                     |       |
| mm²/AWG/kcmil      |                                                                                   | 20                                                                                                                                      |       |

|     |                                                                                   |         |
|-----|-----------------------------------------------------------------------------------|---------|
| 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> | E60425-19870330 |
|                    |                                                                                   | B                                                                                                                                                     |                 |
| Nominal voltage UN |                                                                                   | 150 V                                                                                                                                                 |                 |
| Nominal current IN |                                                                                   | 6 A                                                                                                                                                   |                 |
| mm²/AWG/kcmil      |                                                                                   | 26-20                                                                                                                                                 |                 |

### Accessories

#### Accessories

##### Cable end sleeve

Ferrule - AI 0,25-10 YE - 3241128



Ferrule, sleeve length: 10 mm, length: 14.5 mm, color: yellow

##### Labeled terminal marker

Marker card - SK 2,54/2,8:FORTL.ZAHLEN - 0804853



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 2.54 mm, lettering field size: 2.54 x 2.8 mm

##### Marker pen

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### Accessories

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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### Terminal marking

Marker strip - SK 2,8 WH:REEL - 0805205



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 90000 mm, lettering field size: continuous x 2.8#mm, Number of individual labels: 480000

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Marker card - SK U/2,8 WH:UNBEDRUCKT - 0803883



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 2.8 mm, Number of individual labels: 3600

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