

# PCB terminal block - FKDSO 2,5/ 4-R1 - 1857866

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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>, pitch: 5 mm, number of positions: 4, 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

## 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

RoHS



## Key Commercial Data

Packing unit	50 pc
GTIN	
GTIN	4055626268385

## Technical data

### Item properties

Brief article description	PCB terminal block
Range of articles	FKDSO 2,5/ ..R1
Pitch	5 mm
Number of positions	4
Connection method	Push-in spring connection
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	1
Number of connections	4
Number of potentials	4

### Electrical parameters

Nominal current	20 A
Nom. voltage	320 V

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## Technical data

### Electrical parameters

Rated voltage	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

Length [ l ]	18.8 mm
Width [ w ]	20.6 mm
Height [ h ]	22 mm
Pitch	5 mm
Height (without solder pin)	15.9 mm
Solder pin [P]	3.5 mm
Pin spacing	5 mm
Pin dimensions	0.8 x 1 mm

### Dimensions for PCB design

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## Technical data

### 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
	Test passed
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
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### 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
Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm

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## Technical data

### Air clearances and creepage distances

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
Result	Test passed
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 Tested according to DIN EN 60512-5-2:2003-01 Reduction factor = 1 Number of positions: 4
Specification	IEC 60947-7-4:2013-08
Number of positions	4
Reduction factor	1
Note	Representation based on IEC 60512-5-2:2002-02

### Vibration test

Specification	IEC 60068-2-6:2007-12
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 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 2 TΩ

### Glow-wire test

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

### Alternating climate test

Result	Test passed
Specification	ISO 6988:1985-02
Corrosive stress	KFW 0.2 S/1 cycle

### Standards and Regulations

# PCB terminal block - FKDSO 2,5/ 4-R1 - 1857866

## Technical data

### Standards and Regulations

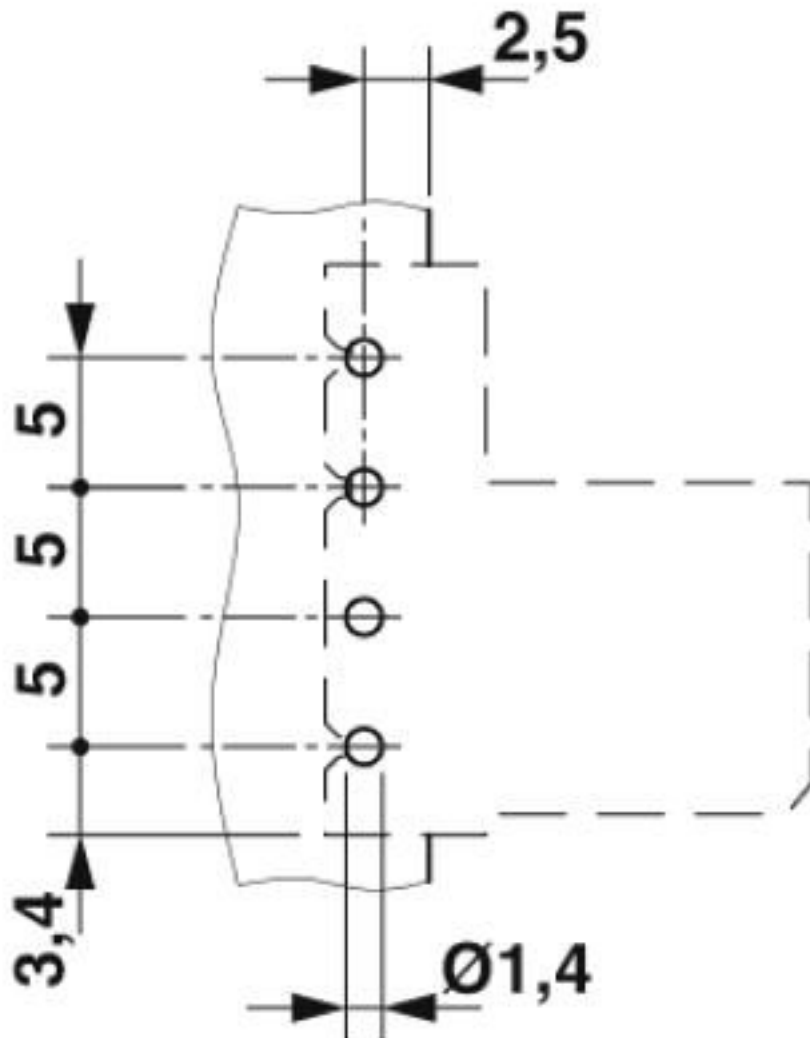
Connection in acc. with standard	EN-VDE
Flammability rating according to UL 94	V0

### Environmental Product Compliance

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

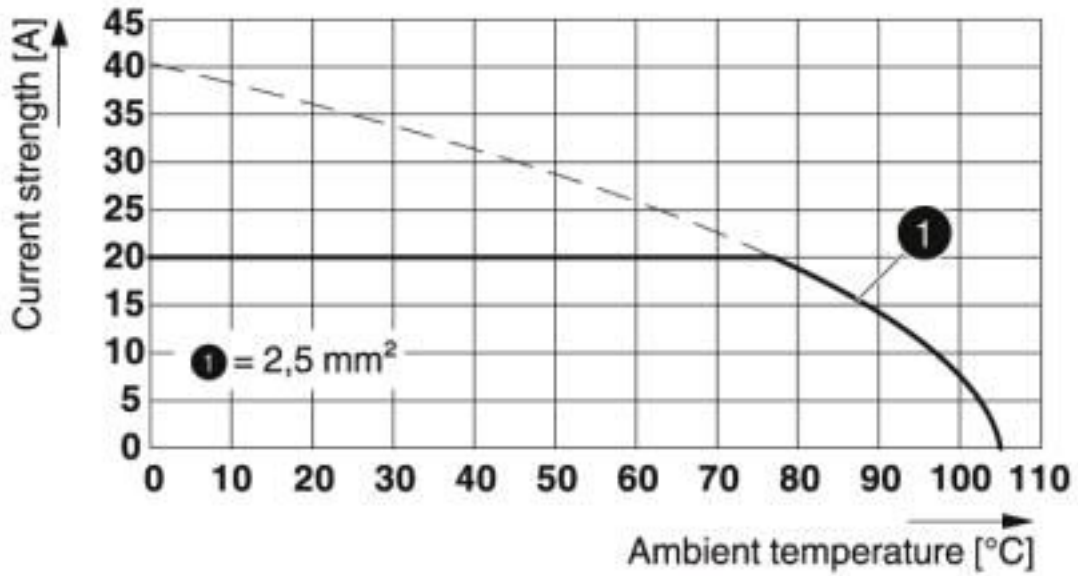
## Drawings

Drilling diagram



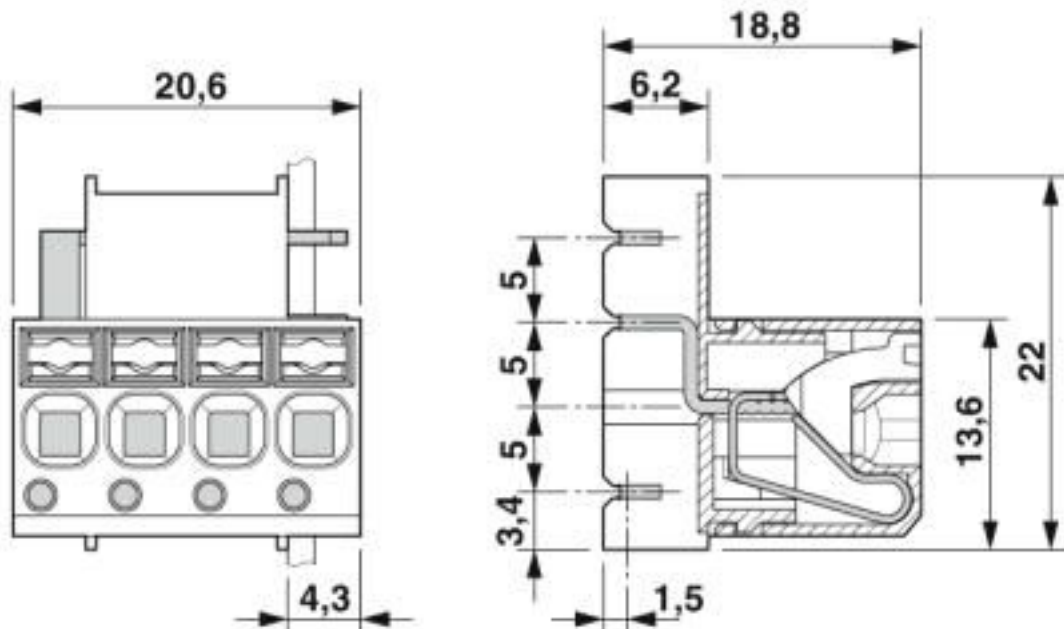
# PCB terminal block - FKDSO 2,5/ 4-R1 - 1857866

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



# PCB terminal block - FKDSO 2,5/ 4-R1 - 1857866

## Classifications

### eCl@ss

eCl@ss 10.0.1	27440401
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 8.0	27440401
eCl@ss 9.0	27440401

### ETIM

ETIM 2.0	EC001031
ETIM 3.0	EC001031
ETIM 4.0	EC002643
ETIM 5.0	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

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#### Approvals

IECEE CB Scheme / VDE Zeichengenehmigung / cULus Recognized / EAC

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#### Ex Approvals

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### Approval details

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## Approvals

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-56776
Nominal voltage UN	320 V		
Nominal current IN	20 A		
mm <sup>2</sup> /AWG/kcmil	0.2-4		

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		

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	

EAC		B.01687
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## 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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