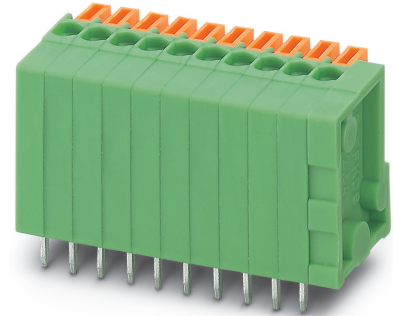


# Data sheet

Order No.: 1789472

Type: FFKDSA1/V-2,54- 8

PCB terminal block, Push-in spring connection



The figure shows the 10-position version

## 1 Main features



- |                           |                           |                        |                     |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos.             | 8                         | • Nominal current      | 6 A                 |
| • Conductor cross section | 0.5 mm <sup>2</sup>       | • Nominal voltage      | 160 V               |
| • Color                   | green (6021)              | • Connection direction | 90 °                |
| • Pitch                   | 2.54 mm                   | • Type of packaging    | packed in cardboard |
| • Connection method       | Push-in spring connection |                        |                     |

## 2 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



Make sure you always use the latest documentation.

It can be downloaded at: [phoenixcontact.net/product/1789472](https://phoenixcontact.net/product/1789472)

### 3 Table of contents

1	Main features.....	1
2	Your advantages .....	1
3	Table of contents .....	2
4	3D model in PDF can be activated (Acrobat Reader only).....	3
5	General Technical Data .....	4
	5.1 item properties .....	4
	5.2 Connection capacity .....	4
	5.3 Connection capacity AWG .....	4
6	Material properties.....	4
	6.1 Material of metal parts.....	4
	6.2 Material of plastic parts .....	4
7	Dimensions.....	6
	7.1 Dimensions for the product .....	6
8	Series drawing.....	7
	8.1 Dimensions for PCB design.....	8
9	Application.....	8
10	Packaging information .....	8
	10.1 Temperature limit values .....	8
11	Mechanical tests.....	9
	11.1 Pull-out test .....	9
	11.2 Check for damage to conductor or loosening .....	9
	11.3 Electrical performance test.....	9
12	Electrical tests .....	10
	12.1 Electrical data .....	10
	12.2 Air and creepage distances .....	10
	12.3 Temperature rise test.....	10
13	Current carrying capacity/derating curves .....	11
	13.1 Vibration test .....	11
	13.2 Shock protection .....	11
	13.3 Testing in a saturated atmosphere in the presence of sulfur dioxide .....	11
14	Approvals / Certificates.....	12
15	Commercial Data.....	13
16	Accessories.....	13

1789472 FFKDSA1/V-2,54- 8

4 3D model in PDF can be activated (Acrobat Reader only)



**1789472 FFKDSA1/V-2,54- 8****5 General Technical Data****5.1 item properties**

Order No.	1789472
Type	FFKDSA1/V-2,54- 8
Product type	PCB terminal block
Range of articles	FFKDS(A) 0,5/..-V
Pitch	2.54 mm
Range of positions	1...20
Number of positions	8
Number of levels	1
Number of connections	8
Number of potentials	8
Connection method	Push-in spring connection
Mounting type	Wave soldering
Connection direction of the conductor to the PCB	90 °
Pin layout	Linear double pinning
Solder pins per potential	2
Product note	The article can be aligned to create different nos. of positions!
Type	PC terminal block can be aligned

**5.2 Connection capacity**

Conductor cross section, solid	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section, flexible	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Stripping length	11 mm

**5.3 Connection capacity AWG**

Conductor cross section AWG	26 ... 20
-----------------------------	-----------

**6 Material properties****6.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201	
Contact material	Cu alloy	
Terminal point surface	Nickel (2 - 3 µm Ni) , Tin (5 - 7 µm Sn)	
Soldering area surface	Nickel (2 - 3 µm Ni) , Tin (5 - 7 µm Sn)	
Surface characteristics	Tin-plated	

**6.2 Material of plastic parts**

	Housing	Actuation element
Color	green (6021)	
Insulating material	PA	PA
Insulating material group	I	I
CTI according to IEC 60112	600	600

**1789472 FFKDSA1/V-2,54- 8**

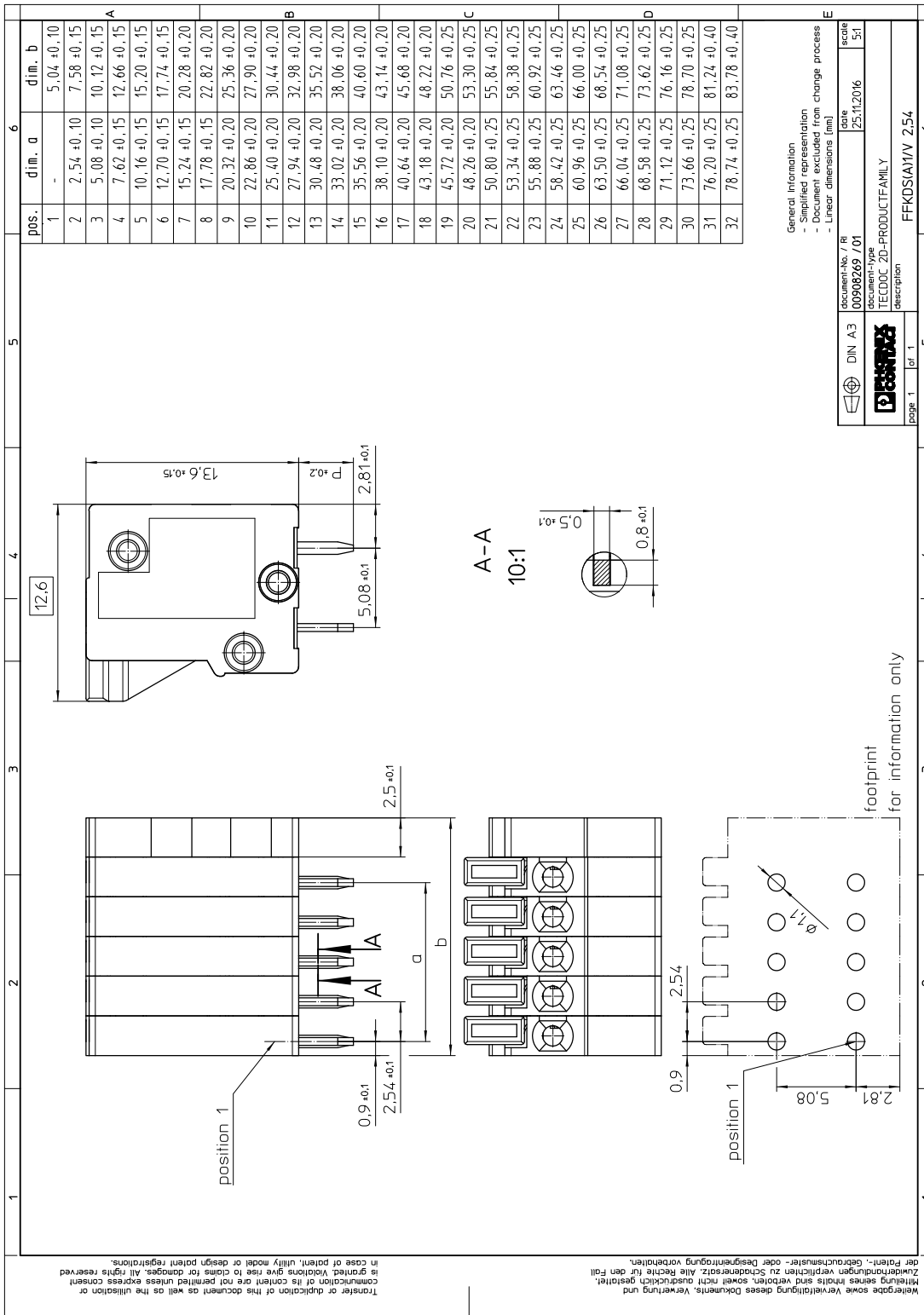
	Housing	Actuation element
Flammability rating according to UL 94	V0	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850	
Glow wire ignition temperature GWIT according to EN 60695-2-13	775	
Temperature for the ball pressure test according to EN 60695-10-2	125 °C	

**1789472 FFKDSA1/V-2,54- 8****7 Dimensions****7.1 Dimensions for the product**

Length	12.6 mm
Width	22.82 mm
Height (without solder pin)	13.6 mm
Total height	17 mm
Solder pin [P]	3.4 mm
Dimension a	17.78 mm

1789472 FFKDSA1/V-2,54- 8

8 Series drawing



**1789472 FFKDSA1/V-2,54- 8****8.1 Dimensions for PCB design**

Hole diameter	1.1 mm
Pin dimensions	0.5 x 0.8 mm
Pin spacing	5.08 mm

**9 Application****10 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	50

**10.1 Temperature limit values**

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)



**1789472 FFKDSA1/V-2,54- 8****11 Mechanical tests****11.1 Pull-out test**

Specification	IEC 60999-1:1990-05
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.14 mm <sup>2</sup> / solid / > 7 N
Conductor cross section/conductor type/tractive force actual value	0.14 mm <sup>2</sup> / flexible / > 7 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm <sup>2</sup> / solid / > 30 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm <sup>2</sup> / flexible / > 30 N

**11.2 Check for damage to conductor or loosening**

Specification	IEC 60999-1:1990-05
Result	Test passed

**11.3 Electrical performance test**

Specification	IEC 60999-1:1990-05
Result	Test passed

**1789472 FFKDSA1/V-2,54- 8****12 Electrical tests****12.1 Electrical data**

Rated current / conductor cross section	6 A / 0.5 mm <sup>2</sup>
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	
Degree of pollution	2

**12.2 Air and creepage distances**

Component	PCB terminal block		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	63 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	1.5 mm	1.5 mm	1.5 mm
Minimum value of the creepage path requirement in acc. with table	1.6 mm	1.5 mm	1.6 mm

**12.3 Temperature rise test**

Specification	IEC 60998-1:1990-04
Result	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K
Conductor cross section/test current/temperature rise	0.5 mm <sup>2</sup> / 6 A / 18 K

## 1789472 FFKDSA1/V-2,54- 8

## 13 Current carrying capacity/derating curves

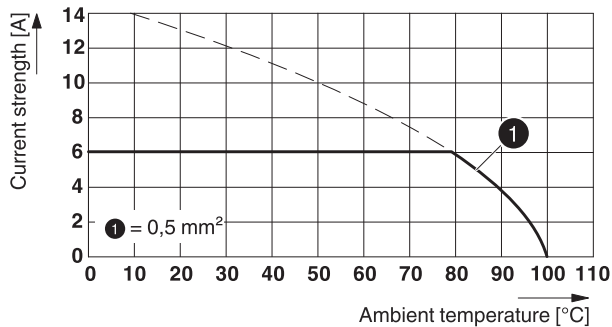
Specification	Following IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	5
Conductor cross section	0.5 mm <sup>2</sup>

**Type: FFKDS/V-2,54**

**Tested according to DIN EN 60512-5-2:2003-01**

**Reduction factor = 1**

**Number of positions: 5**



### 13.1 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
Test directions	X-, Y- and Z-axis
Note	

### 13.2 Shock protection




Specification	DIN VDE 0106-100:1983-03
Back of the hand protection (Ball ø 50)	guaranteed
Finger protection (movable test finger)	guaranteed
Note	unenclosed basic insulation - protected against finger contact with IP20 test finger in acc. with IEC 60529 when connected, above the PCB

### 13.3 Testing in a saturated atmosphere in the presence of sulfur dioxide

Specification	DIN 50018:1988-06
Result	Test passed
Corrosive stress	KFW 0.2 S/1 cycle
Conductor cross section	to 0.5 mm <sup>2</sup>

## 1789472 FFKDSA1/V-2,54- 8

**14 Approvals / Certificates**

CSA 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
Nur starre Leiter	150 V	6 A	- 20	-
EAC 				
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
Nur starre Leiter	150 V	6 A	26 - 20	-

**1789472 FFKDSA1/V-2,54- 8****15 Commercial Data**

Order No.	1789472
Type	FFKDSA1/V-2,54- 8
Pieces per package	50
Net weight	3.86 g
GTIN	4017918231347
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**16 Accessories**

Description	Order No.	Type
	0805205	SK 2,8 WH:REEL
	0803883	SK U/2,8 WH:UNBEDRUCKT
	0804853	SK 2,54/2,8:FORTL.ZAHLEN
	0804879	SK 2,54/2,8:SO
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT
	3241128	AI 0,25-10 YE