

## PCB terminal block - ZFKDS 4-10 - 1907539

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PCB terminal block, nominal current: 32 A, rated voltage (III/2): 630 V, nominal cross section: 4 mm<sup>2</sup>, pitch: 10 mm, number of positions: 1, connection method: Spring-cage connection, mounting: Wave soldering, conductor/PCB connection direction: 45 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 4.6 mm. The article can be aligned to create different nos. of positions!


The figure shows a 5-pos. version of the product

### Your advantages

- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Separate bridge shaft for easily connecting multiple positions to jumpers
- Quick and convenient testing using integrated test option



### Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 193904
GTIN	4017918193904

### Technical data

#### Item properties

Brief article description	PCB terminal block
Range of articles	ZFKDS(A) 4
Pitch	10 mm
Number of positions	1
Connection method	Spring-cage connection
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	1
Number of connections	1
Number of potentials	1

#### Electrical parameters

# PCB terminal block - ZFKDS 4-10 - 1907539

## Technical data

### Electrical parameters

Nominal current	32 A
Nom. voltage	630 V
Rated voltage	630 V
Rated voltage (III/2)	630 V
Rated voltage (II/2)	1000 V
Rated surge voltage (III/3)	6 kV
Rated surge voltage (III/2)	6 kV
Rated surge voltage (II/2)	6 kV

### Connection capacity

Connection method	Spring-cage connection
pluggable	Yes
Conductor cross section solid	0.2 mm <sup>2</sup> ... 6 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 ... 10
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 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 (10 - 16 µm Sn)
Metal surface soldering area (top layer)	Tin (10 - 16 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
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 ]	29 mm
Width [ w ]	11.5 mm
Height [ h ]	27.6 mm
Pitch	10 mm
Height (without solder pin)	23 mm

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## Technical data

### Dimensions for the product

Solder pin [P]	4.6 mm
Pin spacing	12.5 mm
Pin dimensions	1 x 1.4 mm

### Dimensions for PCB design

Hole diameter	1.8 mm
Pin spacing	12.5 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
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

Connection test	IEC 60998-2-2:1991-10
Test result	Test passed
Test for conductor damage and slackening	IEC 60998-2-2:1991-10
	Test passed

### Pull-out test

Pull-out test	IEC 60998-2-2:1991-10
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	6 mm <sup>2</sup> / solid / > 80 N
	4 mm <sup>2</sup> / flexible / > 60 N

### Mechanical tests according to standard

Test specification	IEC 60998-2-2 (in parts)
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### Electrical tests

Rated current	32 A
Conductor cross section	4 mm <sup>2</sup>
Rated voltage (III/2)	630 V
Rated surge voltage (III/2)	6 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)	5.5 mm

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## Technical data

### Air clearances and creepage distances

Minimum clearance - inhomogeneous field (III/2)	5.5 mm
Minimum clearance - inhomogeneous field (II/2)	5.5 mm
Minimum creepage distance value (III/3)	8 mm
Minimum creepage distance value (III/2)	5.5 mm
Minimum creepage distance value (II/2)	5.5 mm

### Temperature-rise test

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Requirement temperature-rise test	Increase in temperature $\leq 45$ K

### Current carrying capacity / derating curves

Caption	Type: ZFKDS 4-10 Test according to DIN EN 60947-7-4 (VDE 0611-7-4):2014-08 Illustration 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 60068-2-6:1995-03
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

### Resistance to ageing, humidity and penetration of solids

Dry heat	168 h/100°C
Humid heat	48 h/30 °C/92 %

### Insulation resistance

Specification	IEC 60998-2-2:1991-10
Result	Test passed
Insulation resistance, neighboring positions	$10^9 \Omega$

### Glow-wire test

Specification	IEC 60998-2-2:1991-10
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

# PCB terminal block - ZFKDS 4-10 - 1907539

## Technical data

### Mechanical strength/tumbling barrel test

Specification	IEC 60998-1:1990-04
Height of fall	50 cm
Number of drop cycles	50

### Standards and Regulations

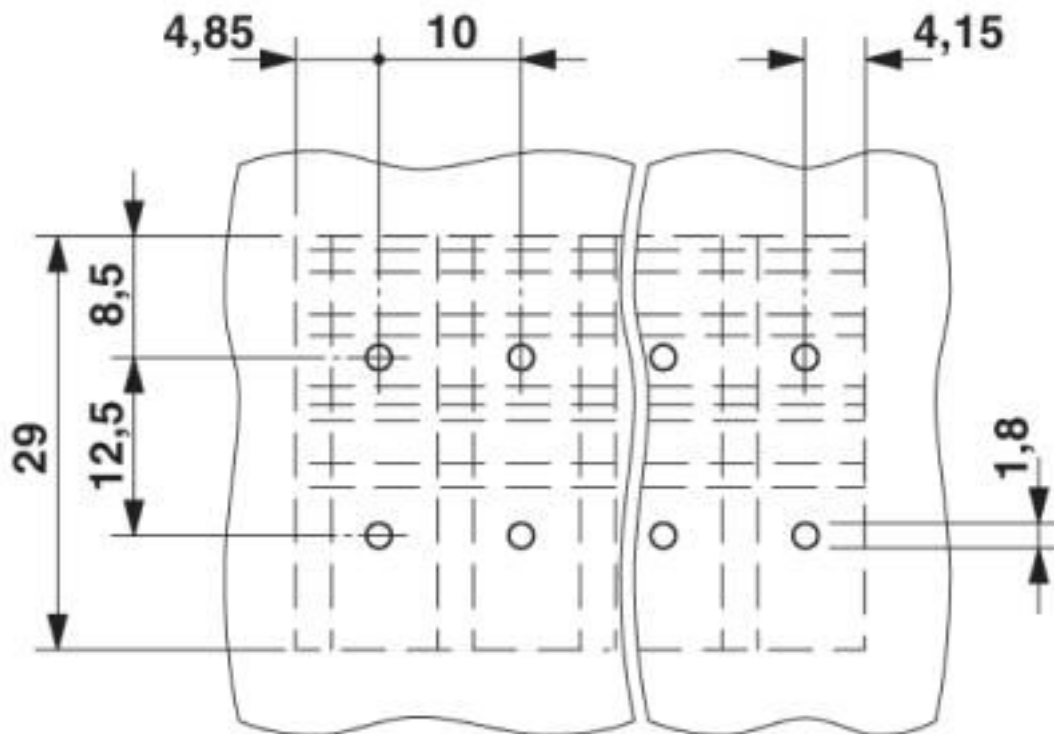
Connection in acc. with standard	EN-VDE
	CUL
Flammability rating according to UL 94	V0

### Environmental Product Compliance

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

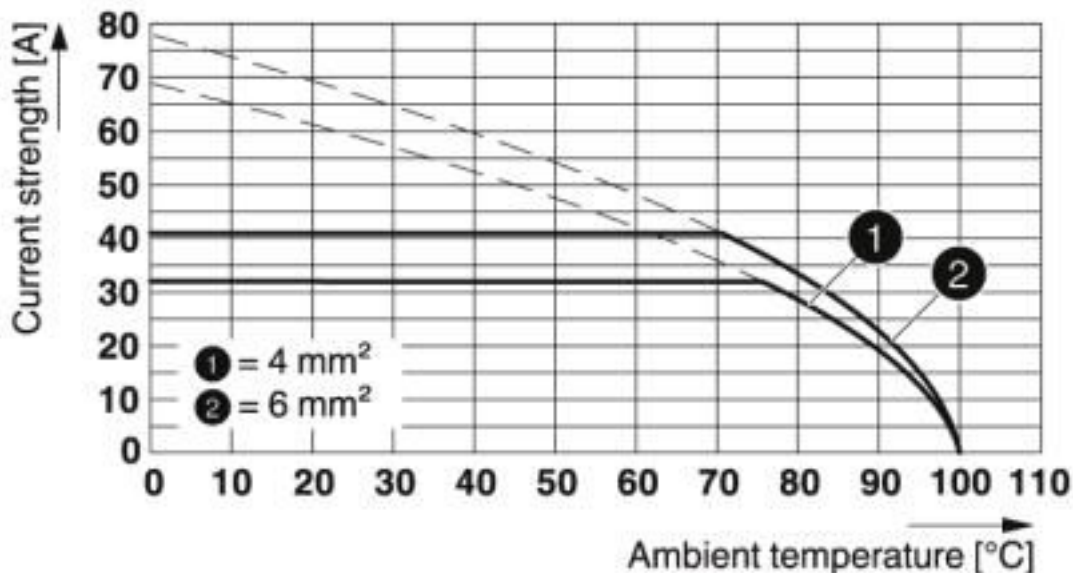
## Drawings

Drilling diagram



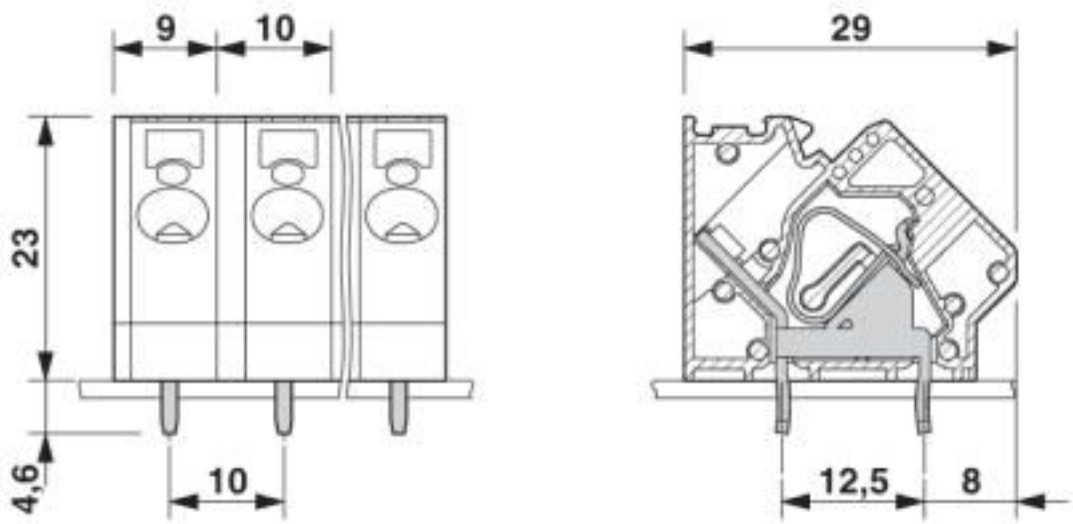
# PCB terminal block - ZFKDS 4-10 - 1907539

Diagram



Type: ZFKDS 4-10  
 Test according to DIN EN 60947-7-4 (VDE 0611-7-4):2014-08  
 Illustration 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 4.0	27141100
eCl@ss 4.1	27141100

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## Classifications

### eCl@ss

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

IECEE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

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#### Ex Approvals

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### Approval details

# PCB terminal block - ZFKDS 4-10 - 1907539

## Approvals

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE-51234
Nominal voltage UN	630 V		
Nominal current IN	32 A		
mm <sup>2</sup> /AWG/kcmil	0.2-4		

VDE Gutachten mit Fertigungsüberwachung		<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>	40036082
Nominal voltage UN	630 V		
Nominal current IN	32 A		
mm <sup>2</sup> /AWG/kcmil	0.2-4		

EAC			B.01687
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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>	E60425-19941110
	B	C	D
Nominal voltage UN	300 V	300 V	600 V
Nominal current IN	30 A	30 A	5 A
mm <sup>2</sup> /AWG/kcmil	24-10	24-10	24-10

## Accessories

### Accessories

#### Bridge

Plug-in bridge - FBSK 10-10 - 1928437



Bridge, fully insulated, pitch 10 mm, 10-pos.



## PCB terminal block - ZFKDS 4-10 - 1907539

### Accessories

Plug-in bridge - FBSK 5-10 - 1928424



Bridge, fully insulated, pitch 10 mm, 5-pos.

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Plug-in bridge - FBSK 4-10 - 1928411



Bridge, fully insulated, pitch 10 mm, 4-pos.

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Plug-in bridge - FBSK 3-10 - 1928408



Bridge, fully insulated, pitch 10 mm, 3-pos.

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Plug-in bridge - FBSK 2-10 - 1928398



Bridge, fully insulated, pitch 10 mm, 2-pos.

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### Crimping tool

Crimping pliers - CRIMPFOX 6 - 1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

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### Flange

## PCB terminal block - ZFKDS 4-10 - 1907539

### Accessories

PCB terminal block - FL-ZFKDS 4 - 1928495



Pair of flanges, can be snapped onto a row of single terminal blocks

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### Labeled terminal marker

Zack Marker strip, flat - ZBF10 CUS - 0825031



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 10 mm, lettering field size: 5.15 x 10 mm, Number of individual labels: 10

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### Pitch spacer

Pitch spacer - RZ-ZFKDS 4 - 1928521



Pitch spacer, 2.5 mm wide

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### 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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### Terminal marking

Zack Marker strip, flat - ZBF10:UNBEDRUCKT - 0809997



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 10 mm, lettering field size: 5.15 x 10 mm, Number of individual labels: 10

## PCB terminal block - ZFKDS 4-10 - 1907539

### Accessories

Marker card - SK U/5,0 WH:UNBEDRUCKT - 0803922



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 5 mm, Number of individual labels: 630

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### Test plug terminal block

Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

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### Necessary add-on products

PCB terminal block - ZFKDSA 4- 9 - 1907542



End terminal block, 9 mm wide, necessary at the end of a row of terminal blocks

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### Additional products

PCB terminal block - ZFKDSA 4- 9 - 1907542



End terminal block, 9 mm wide, necessary at the end of a row of terminal blocks

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