

## PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

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PCB terminal block, nominal current: 192 A, rated voltage (III/2): 1000 V, nominal cross section: 70 mm<sup>2</sup>, pitch: 17.5 mm, number of positions: 5, connection method: Screw connection with tension sleeve, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear 2x2 pinning, Solder pin [P]: 4 mm

### Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Quick and convenient testing using integrated test option
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve



### Key Commercial Data

Packing unit	10 pc
Minimum order quantity	10 pc
GTIN	 4 055626 029047
GTIN	4055626029047

### Technical data

#### Item properties

Brief article description	PCB terminal block
Range of articles	MKDSP 50
Pitch	17.5 mm
Number of positions	5
Connection method	Screw connection with tension sleeve
Drive form screw head	Torx® (T20)
Screw thread	M6
Mounting type	Wave soldering
Pin layout	Linear 2x2 pinning
Number of levels	1

# PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

## Technical data

### Item properties

Number of connections	5
Number of potentials	5

### Electrical parameters

Nominal current	192 A
Nom. voltage	1000 V
Rated voltage	1000 V
Rated voltage (III/2)	1000 V
Rated voltage (II/2)	1000 V
Rated surge voltage (III/3)	8 kV
Rated surge voltage (III/2)	8 kV
Rated surge voltage (II/2)	6 kV

### Connection capacity

Connection method	Screw connection with tension sleeve
pluggable	no
Conductor cross section solid	1.5 mm <sup>2</sup> ... 70 mm <sup>2</sup>
Single-conductor/terminal point multi-stranded	1.5 mm <sup>2</sup> ... 70 mm <sup>2</sup>
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 70 mm <sup>2</sup>
Conductor cross section AWG / kcmil	16 ... 2/0
Conductor cross section flexible, with ferrule without plastic sleeve	1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>
2 conductors with same cross section, solid	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with same cross section, flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Stripping length	20 mm
Torque	5.5 Nm

### Information on the aluminum conductor

Cross section-torque-form of cable	Cable cross section:50 mm <sup>2</sup> ; Torque:5.5 Nm; Form of cable:sector-shaped, single-strand, class 1, $\alpha = 90^\circ$ (se)
	Cable cross section:35 mm <sup>2</sup> ; Torque:5.5 Nm; Form of cable:round, single-strand, class 1(re)
	Cable cross section:25 mm <sup>2</sup> ; Torque:5.5 Nm; Form of cable:round, single-strand, class 1(re)
	Cable cross section:16 mm <sup>2</sup> ; Torque:5.5 Nm; Form of cable:round, single-strand, class 1(re)
Specification	DIN VDE 0276-603 (VDE 0276-603):2010-03
Note on conductor pretreatment	The following measures are required for durable and reliable contacting of the aluminum conductor: the stripped end of the aluminum conductor must be separated from the oxide layer using a blade, and immediately dipped in non-acid and non-alkali Vaseline. The pretreatment must be repeated when connecting the conductors anew.

### Material data - contact

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## Technical data

### 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 (4 - 8 µm Sn)
Metal surface soldering area (top layer)	Tin (4 - 8 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 ]	32 mm
Width [ w ]	90 mm
Height [ h ]	59 mm
Pitch	17.5 mm
Height (without solder pin)	55 mm
Solder pin [P]	4 mm
Pin dimensions	1.4 x 1.4 mm

### Dimensions for PCB design

Hole diameter	2.4 mm
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### 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 (dependent on the 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	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

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## Technical data

### Pull-out test

	70 mm <sup>2</sup> / stranded / > 285 N
	70 mm <sup>2</sup> / flexible / > 285 N
	50 mm <sup>2</sup> / flexible with ferrule / > 236 N
	1.5 mm <sup>2</sup> / flexible with ferrule / > 40 N

### Mechanical tests according to standard

Test specification	IEC 60947-7-4
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### Electrical tests

Rated current	192 A
Conductor cross section	70 mm <sup>2</sup>
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 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)	8 mm
Minimum clearance - inhomogeneous field (III/2)	8 mm
Minimum clearance - inhomogeneous field (II/2)	5.5 mm
Minimum creepage distance value (III/3)	12.5 mm
Minimum creepage distance value (III/2)	8 mm
Minimum creepage distance value (II/2)	5.5 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: MKDSP 50/...-17,5(-F)(-FL)
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)

## PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

### Technical data

#### Vibration test

Test duration per axis	2.5 h
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#### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 6 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

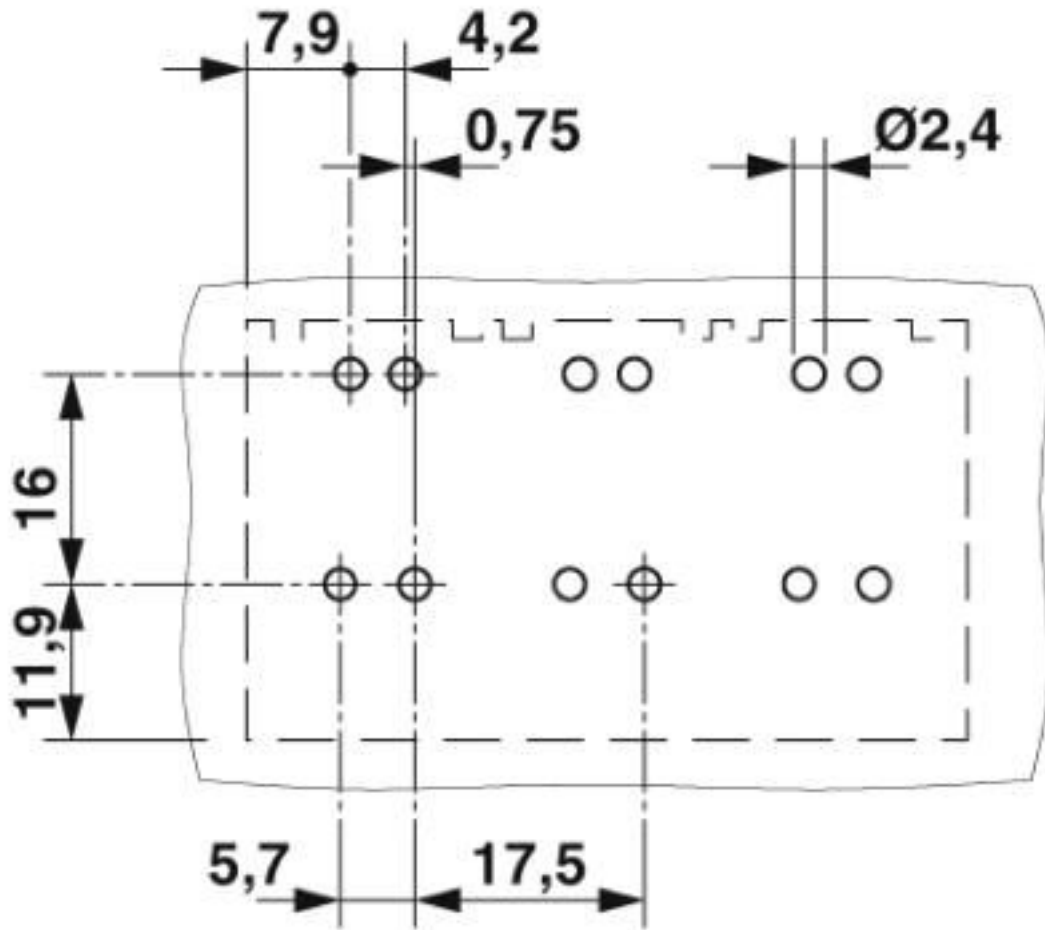
#### Environmental Product Compliance

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

### Drawings

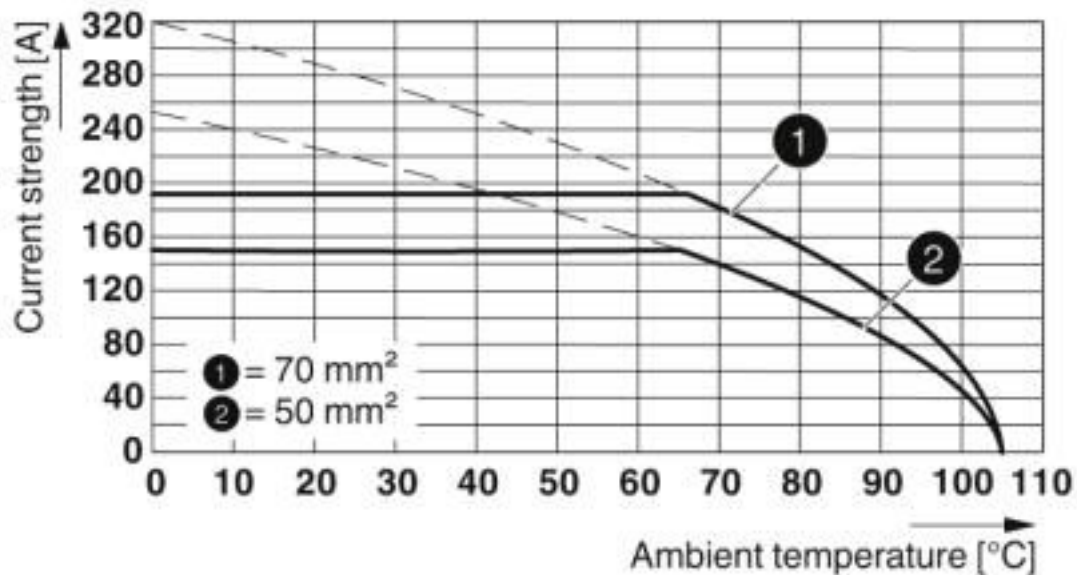
# PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

Drilling diagram



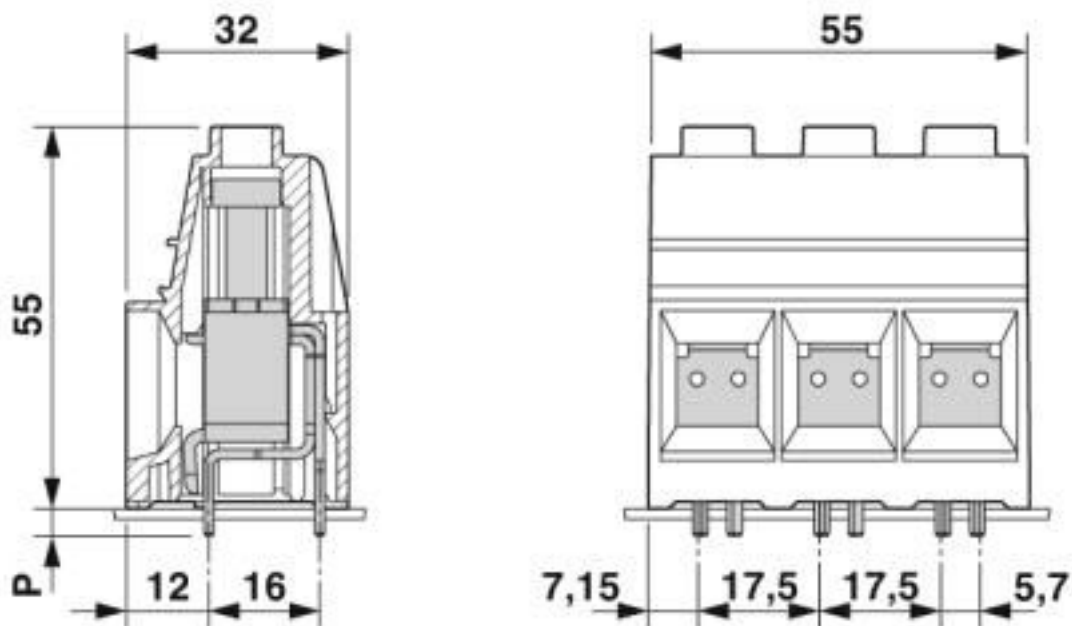
# PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

Diagram



Type: MKDSP 50/...-17,5(-F)(-FL)

Dimensional drawing



## Classifications

eCl@ss

eCl@ss 10.0.1	27440401
eCl@ss 5.1	27261100

# PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

## Classifications

### eCl@ss

eCl@ss 6.0	27261100
eCl@ss 7.0	27440401
eCl@ss 8.0	27440401
eCl@ss 9.0	27440401

### ETIM

ETIM 5.0	EC002643
ETIM 6.0	EC002643
ETIM 7.0	EC002643

### UNSPSC

UNSPSC 13.2	39121432
UNSPSC 18.0	39121432
UNSPSC 19.0	39121432
UNSPSC 20.0	39121432
UNSPSC 21.0	39121432

## Approvals


### Approvals

#### Approvals

IECEE CB Scheme / VDE Zeichengenehmigung / EAC / cULus Recognized

#### Ex Approvals

### Approval details

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-55973
Nominal voltage UN	1000 V		
Nominal current IN	192 A		
mm <sup>2</sup> /AWG/kcmil	1.5-70		



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## Approvals

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>	40041859
Nominal voltage UN	1000 V		
Nominal current IN	192 A		
mm <sup>2</sup> /AWG/kcmil	1.5-70		

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>	E60425-19770427
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	160 A	160 A	
mm <sup>2</sup> /AWG/kcmil	16	16	

## Accessories

### Accessories

#### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



## PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

### Accessories

Insulating sleeve - MPS-IH BU - 0201689

Insulating sleeve, color: blue



Insulating sleeve - MPS-IH YE - 0201692

Insulating sleeve, color: yellow



Insulating sleeve - MPS-IH GN - 0201702

Insulating sleeve, color: green



Insulating sleeve - MPS-IH GY - 0201728

Insulating sleeve, color: gray



Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



### Screwdriver tools

## PCB terminal block - MKDSP 50/ 5-17,5 - 1856155

### Accessories

Screw insert - SF-BIT-TX 30-50 - 1212586



Screw bit, Torx<sup>®</sup>, E6.3-1/4" drive, size: TX 30 x 50 mm, hardened, suitable for holder according to DIN 3126-F6.3/ISO 1173

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Screwdriver - SF-TXH 30X115 - 1200153



Screwdriver, Torx<sup>®</sup> with bore hole, TX 30 x 115, two-component handle

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Test plug terminal block

Reducing plug - RPS - 0201647



Reducing plug, color: gray

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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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