

PCB terminal block - MKDSP 50/ 3-17,5 - 1856139

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PCB terminal block, nominal current: 192 A, rated voltage (III/2): 1000 V, nominal cross section: 70 mm², pitch: 17.5 mm, number of positions: 3, 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 029061
GTIN	4055626029061

Technical data

Item properties

Brief article description	PCB terminal block
Range of articles	MKDSP 50
Pitch	17.5 mm
Number of positions	3
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

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Technical data

Item properties

Number of connections	3
Number of potentials	3

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 ² ... 70 mm ²
Single-conductor/terminal point multi-stranded	1.5 mm ² ... 70 mm ²
Conductor cross section flexible	1.5 mm ² ... 70 mm ²
Conductor cross section AWG / kcmil	16 ... 2/0
Conductor cross section flexible, with ferrule without plastic sleeve	1.5 mm ² ... 50 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	1.5 mm ² ... 50 mm ²
2 conductors with same cross section, solid	1.5 mm ² ... 16 mm ²
2 conductors with same cross section, flexible	1.5 mm ² ... 25 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm ² ... 16 mm ²
Stripping length	20 mm
Torque	5.5 Nm

Information on the aluminum conductor

Cross section-torque-form of cable	Cable cross section:50 mm ² ; Torque:5.5 Nm; Form of cable:sector-shaped, single-strand, class 1, $\alpha = 90^\circ$ (se)
	Cable cross section:35 mm ² ; Torque:5.5 Nm; Form of cable:round, single-strand, class 1(re)
	Cable cross section:25 mm ² ; Torque:5.5 Nm; Form of cable:round, single-strand, class 1(re)
	Cable cross section:16 mm ² ; 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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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]	55 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 ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N

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Technical data

Pull-out test

	70 mm ² / stranded / > 285 N
	70 mm ² / flexible / > 285 N
	50 mm ² / flexible with ferrule / > 236 N
	1.5 mm ² / 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 ²
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)

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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

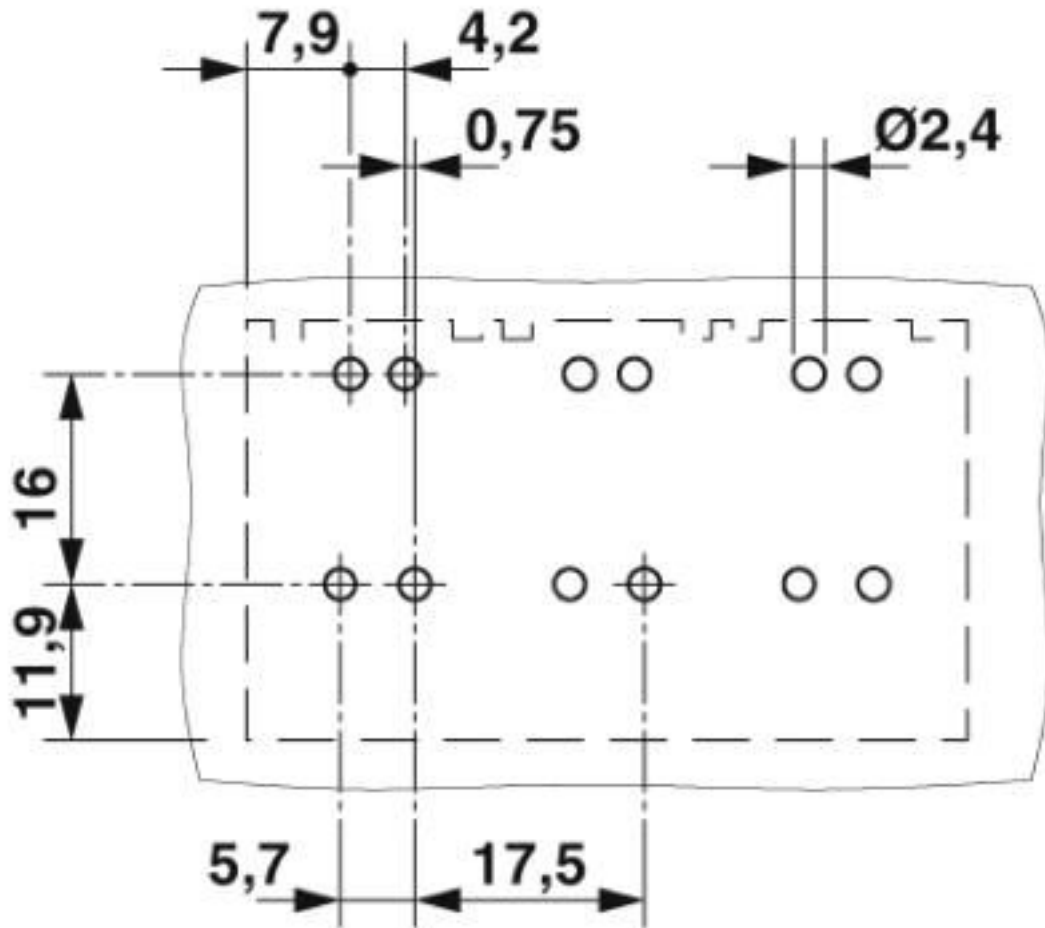
Environmental Product Compliance

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

Drawings

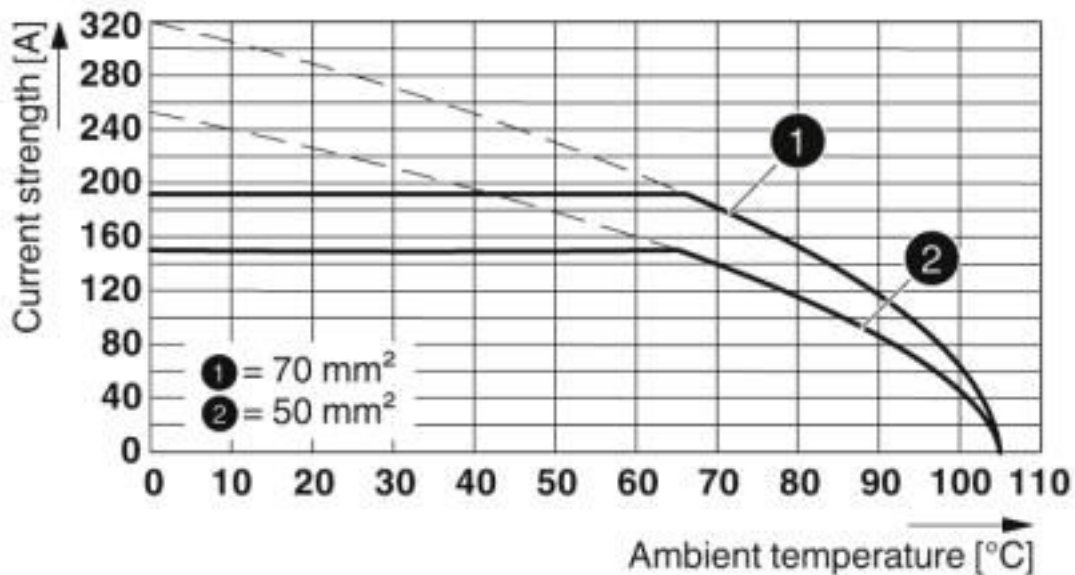
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Drilling diagram



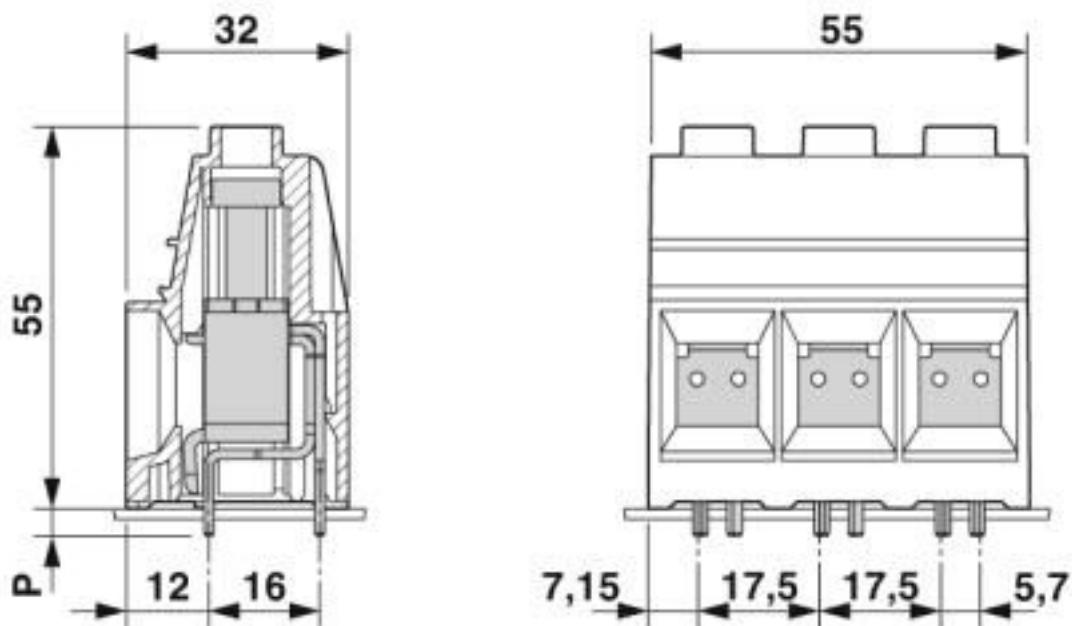
PCB terminal block - MKDSP 50/ 3-17,5 - 1856139

Diagram



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

Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440401
eCl@ss 5.1	27261100

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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		http://www.iecee.org/	DE1-55973
Nominal voltage UN	1000 V		
Nominal current IN	192 A		
mm ² /AWG/kcmil	1.5-70		

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Approvals

VDE Zeichengenehmigung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40041859
Nominal voltage UN	1000 V		
Nominal current IN	192 A		
mm ² /AWG/kcmil	1.5-70		

EAC		B.01687
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19770427
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	160 A	160 A	
mm ² /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



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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

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Accessories

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



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

Screwdriver - SF-TXH 30X115 - 1200153



Screwdriver, Torx[®] with bore hole, TX 30 x 115, two-component handle

Test plug terminal block

Reducing plug - RPS - 0201647



Reducing plug, color: gray

Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm² conductor cross section, color: gray

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