

# PCB terminal block - MKDSP 25/ 6-15,00-F



1932533

<https://www.phoenixcontact.com/pc/products/1932533>

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PCB terminal block, nominal current: 125 A, rated voltage (III/2): 1000 V, nominal cross section: 35 mm<sup>2</sup>, number of potentials: 6, number of rows: 1, number of positions per row: 6, product range: MKDSP 25/..-F, pitch: 15 mm, connection method: Screw connection with tension sleeve, screw head form: Z2L Slotted Pozidriv, mounting: Wave soldering, conductor/PCB connection direction: 0 °, color: green, Pin layout: Linear pinning, Solder pin [P]: 4.5 mm, number of solder pins per potential: 4, type of packaging: packed in cardboard. Avoid placing permanent mechanical loads on the terminal

## 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
- Mounting flanges reduce the mechanical strain on the soldering spots
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve

## Commercial Data

Item number	1932533
Packing unit	10 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	AAOIAB
Catalog Page	Page 455 (C-1-2013)
GTIN	4017918902056
Weight per Piece (including packing)	131.38 g
Weight per Piece (excluding packing)	131.38 g
Customs tariff number	85369010
Country of origin	SK

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## Technical Data

### Product properties

Type	Standard
Product line	COMBICON Terminals XL
Product type	Printed circuit board terminal
Number of positions	6
Pitch	15 mm
Number of connections	6
Number of rows	1
Mounting flange	yes
Number of potentials	6
Pin layout	Linear pinning
Solder pins per potential	4

### Electrical properties

Nominal current $I_N$	125 A
Nominal voltage $U_N$	1000 V
Degree of pollution	3
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV

### Connection data

#### Connection technology

Type	Standard
Nominal cross section	35 mm <sup>2</sup>

#### Conductor connection

Connection method	Screw connection with tension sleeve
Conductor cross section solid	0.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	20 ... 2
Conductor cross section flexible, with ferrule without plastic sleeve	1 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
2 conductors with same cross section, solid	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Stripping length	18 mm

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Tightening torque	2.5 Nm ... 4.5 Nm ( $\leq 25 \text{ mm}^2 = 2.5 \text{ Nm}$ ; $35 \text{ mm}^2 = 4.5 \text{ Nm}$ )
Information on the aluminum conductor	
Cross section / torque / form of conductor	Cable cross section: $35 \text{ mm}^2$ ; Torque: $4.5 \text{ Nm}$ ; 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.

## Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning
Drive form screw head	Slotted Pozidriv (Z2L)
Drive form screw head	Slotted Pozidriv (Z2L)

## Processing notes

Process	Wave soldering
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## Material specifications

### 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 ( $5 - 7 \mu\text{m Sn}$ )
Metal surface soldering area (top layer)	Tin ( $5 - 7 \mu\text{m Sn}$ )

### Material data - housing

Color (Housing)	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	$125 \text{ }^\circ\text{C}$

### Material data – actuating element

Color ()	()
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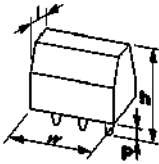
## Dimensions

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Dimensional drawing	
Pitch	15 mm
Width [w]	120 mm
Height [h]	43.5 mm
Length [l]	31 mm
Installed height	39 mm
Solder pin length [P]	4.5 mm

## PCB design

Pin spacing	12.5 mm
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## Mechanical tests

### Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

### Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.5 mm <sup>2</sup> / solid / > 20 N
	0.5 mm <sup>2</sup> / flexible / > 20 N
	35 mm <sup>2</sup> / stranded / > 190 N
	35 mm <sup>2</sup> / flexible / > 190 N

## Electrical tests

### Temperature-rise test

Specification	IEC 60947-7-4:2013-08
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.

### Short-time withstand current

Specification	IEC 60947-7-4:2013-08
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### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600

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Rated insulation voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	8 kV
minimum clearance value - non-homogenous field (II/2)	8 mm
minimum creepage distance (II/2)	8 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

### Glow-wire test

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

### Aging

Specification	IEC 60947-7-4:2013-08
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### Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

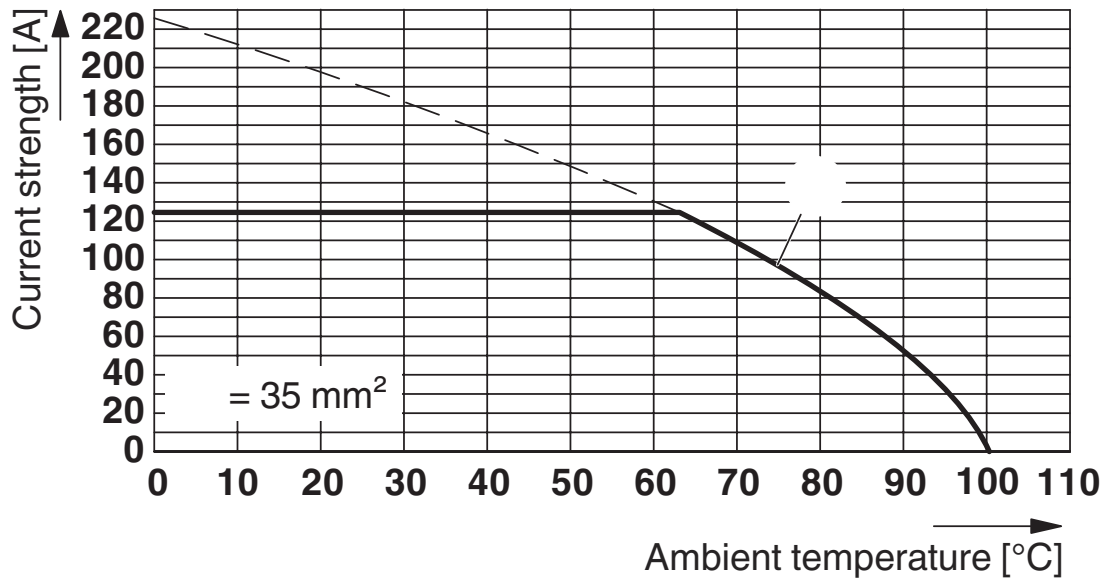
Type of packaging	packed in cardboard
Outer packaging type	Carton

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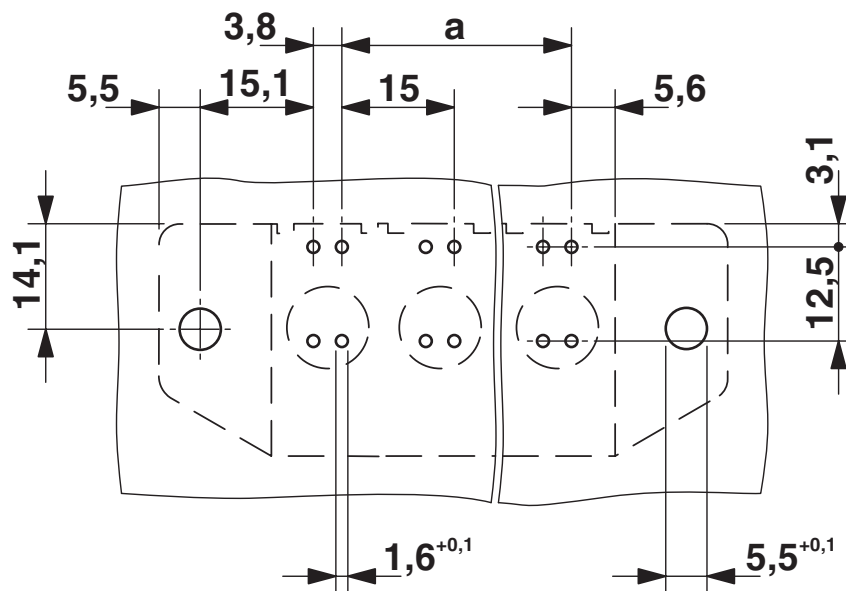
## Drawings

Diagram



Type: MKDSP 25/...-15,00(-F)

Drilling plan/solder pad geometry



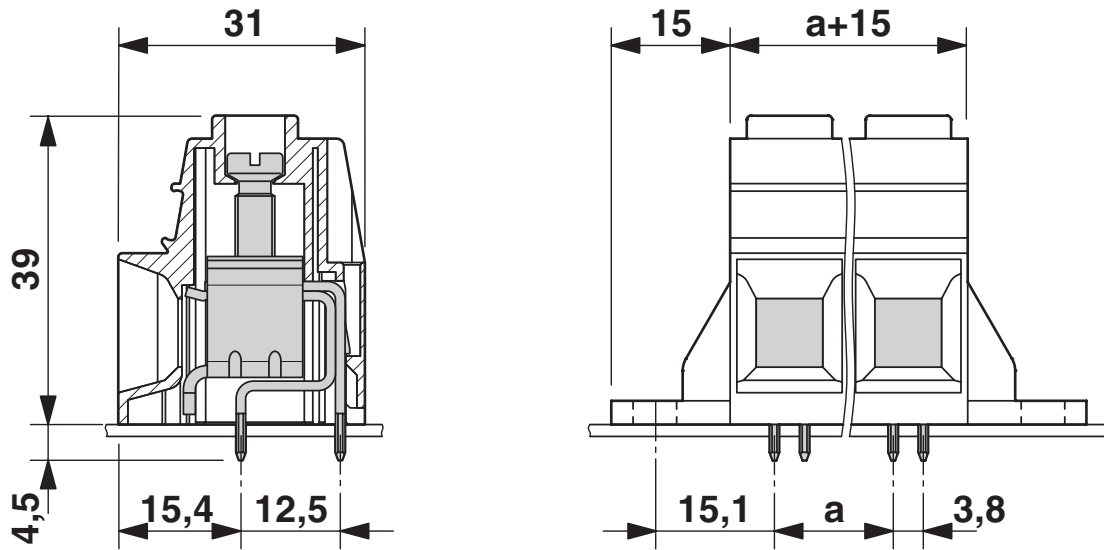
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Dimensional drawing



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## Approvals



**EAC**

Approval ID: B.01687



**cULus Recognized**

Approval ID: E60425-19770427

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B				
	600 V	115 A	20 - 2	-
Use group C				
	600 V	115 A	20 - 2	-



**VDE Zeichengenehmigung**

Approval ID: 40041859

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	1000 V	125 A	-	0.5 - 35

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## Classifications

### ECLASS

ECLASS-9.0	27440401
ECLASS-10.0.1	27440401
ECLASS-11.0	27460101

### ETIM

ETIM 8.0	EC002643
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental Product Compliance

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

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## Accessories

### Reducing plug

Reducing plug - RPS - 0201647

<https://www.phoenixcontact.com/pc/products/0201647>



Reducing plug, color: gray

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### Screwdriver

Screwdriver - SZS 1,0X6,5 VDE - 1205079

<https://www.phoenixcontact.com/pc/products/1205079>



Screwdriver, slot-headed, VDE insulated, size: 1.0 x 6.5 x 150 mm, 2-component grip, with non-slip grip

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## Marker strip

Marker strip - SK 10,0 WH:REEL - 0812188

<https://www.phoenixcontact.com/pc/products/0812188>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 90000 mm, lettering field size: continuous x 10 mm, Number of individual labels: 54000

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## Zack Marker strip, flat

Zack Marker strip, flat - ZBF 15:UNBEDRUCKT - 0811202

<https://www.phoenixcontact.com/pc/products/0811202>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 15 mm, lettering field size: 15 x 5.2 mm, Number of individual labels: 5

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## Test plugs

Test plugs - MPS-MT - 0201744

<https://www.phoenixcontact.com/pc/products/0201744>



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

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## Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

<https://www.phoenixcontact.com/pc/products/0201663>



Insulating sleeve, color: white

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## Insulating sleeve

Insulating sleeve - MPS-IH RD - 0201676

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Insulating sleeve, color: red



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## Insulating sleeve

Insulating sleeve - MPS-IH BU - 0201689

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Insulating sleeve, color: blue



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## Insulating sleeve

Insulating sleeve - MPS-IH YE - 0201692

<https://www.phoenixcontact.com/pc/products/0201692>

Insulating sleeve, color: yellow



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## Insulating sleeve

Insulating sleeve - MPS-IH GN - 0201702

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Insulating sleeve, color: green



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## Insulating sleeve

Insulating sleeve - MPS-IH GY - 0201728

<https://www.phoenixcontact.com/pc/products/0201728>

Insulating sleeve, color: gray



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## Insulating sleeve

Insulating sleeve - MPS-IH BK - 0201731

<https://www.phoenixcontact.com/pc/products/0201731>

Insulating sleeve, color: black



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## Zack Marker strip, flat

Zack Marker strip, flat - ZBF 15 CUS - 0825019

<https://www.phoenixcontact.com/pc/products/0825019>



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: 15 mm, lettering field size: 5.15 x 15.1 mm, Number of individual labels: 5

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