

Data sheet

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Product version 02
Document revision 0

Order No.: 1888690

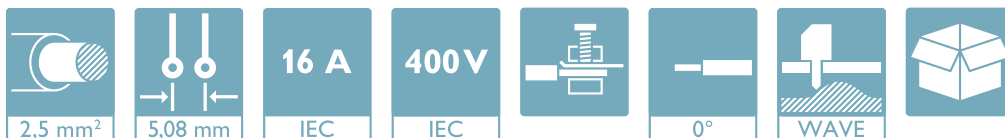
Type: MKDSN 2,5/ 3-5,08

PCB terminal block, Screw connection with tension sleeve



The illustration shows a 2-position version

1 Main features



- | | | | |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • Number of positions | 3 | • Nominal current | 16 A |
| • Conductor cross section | 2.5 mm ² | • Nominal voltage | 400 V |
| • Color | green | • Connection direction | 0 ° |
| • Pitch | 5.08 mm | • Type of packaging | packed in cardboard |
| • Connection method | Screw connection with tension sleeve | | |

2 Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Extremely small design for the respective conductor cross section
- ✓ Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve
- ✓ The latching on the side enables various numbers of positions to be combined



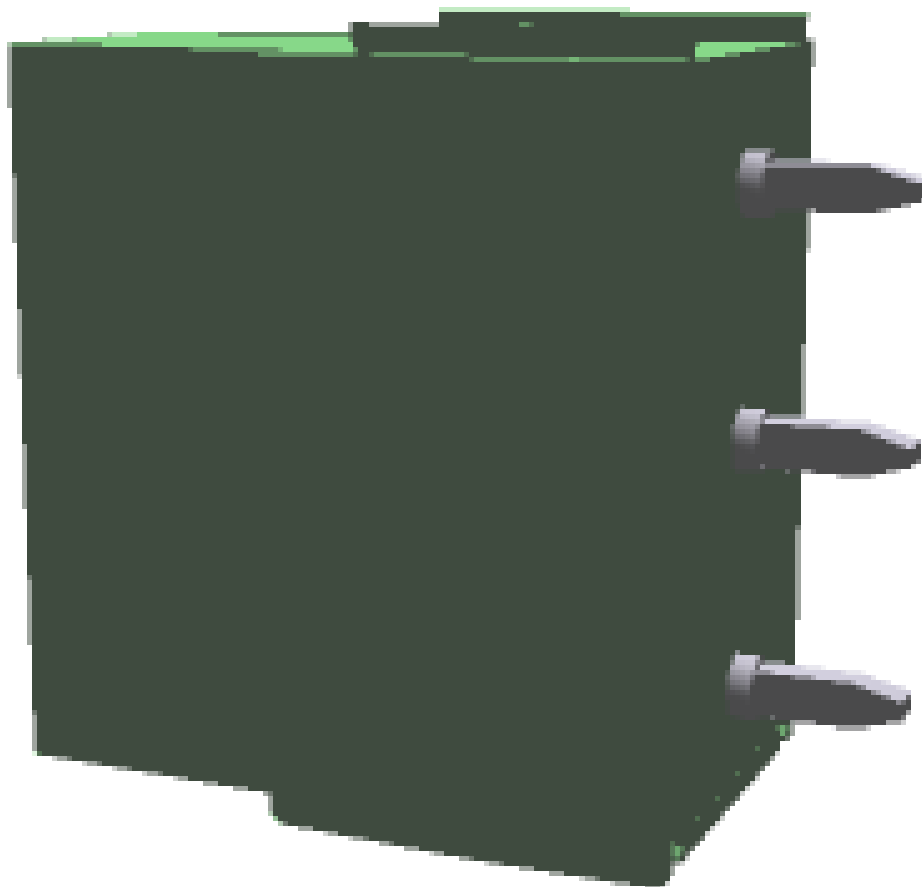
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It can be downloaded at: phoenixcontact.net/product/1888690

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



1888690 MKDSN 2,5/ 3-5,08**5 Item properties**

Order No.	1888690
Type	MKDSN 2,5/ 3-5,08
Range of articles	MKDSN 2,5
Pitch	5.08 mm
Number of positions	3
Connection method	Screw connection with tension sleeve
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
Mounting type	Wave soldering
Pin layout	Linear pinning
Product note	The article can be aligned to create different nos. of positions!

5.1 Connection capacity

Conductor cross section, solid	0.2 mm ² to 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² to 2.5 mm ²
Conductor cross section AWG/kcmil	24 to 14
2 conductors with same cross section, solid	0.2 mm ² to 0.75 mm ²
2 conductors with same cross section, stranded	0.2 mm ² to 0.75 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² to 2.5 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² to 2.5 mm ²
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm ² to 0.75 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm ² to 1.5 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.4 mm
Stripping length	6.5 mm

5.2 Material data

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	Sn 4 µm ... 8 µm	
Soldering area surface	Sn 4 µm ... 8 µm	
Surface characteristics	Tin-plated	
Insulating material data	Housing	
Insulating material	PA	
CTI according to IEC 60112	600	
Flammability rating according to UL 94	V0	
Color	green (6021)	

6 Dimensions**6.1 Maßangaben zum Produkt**

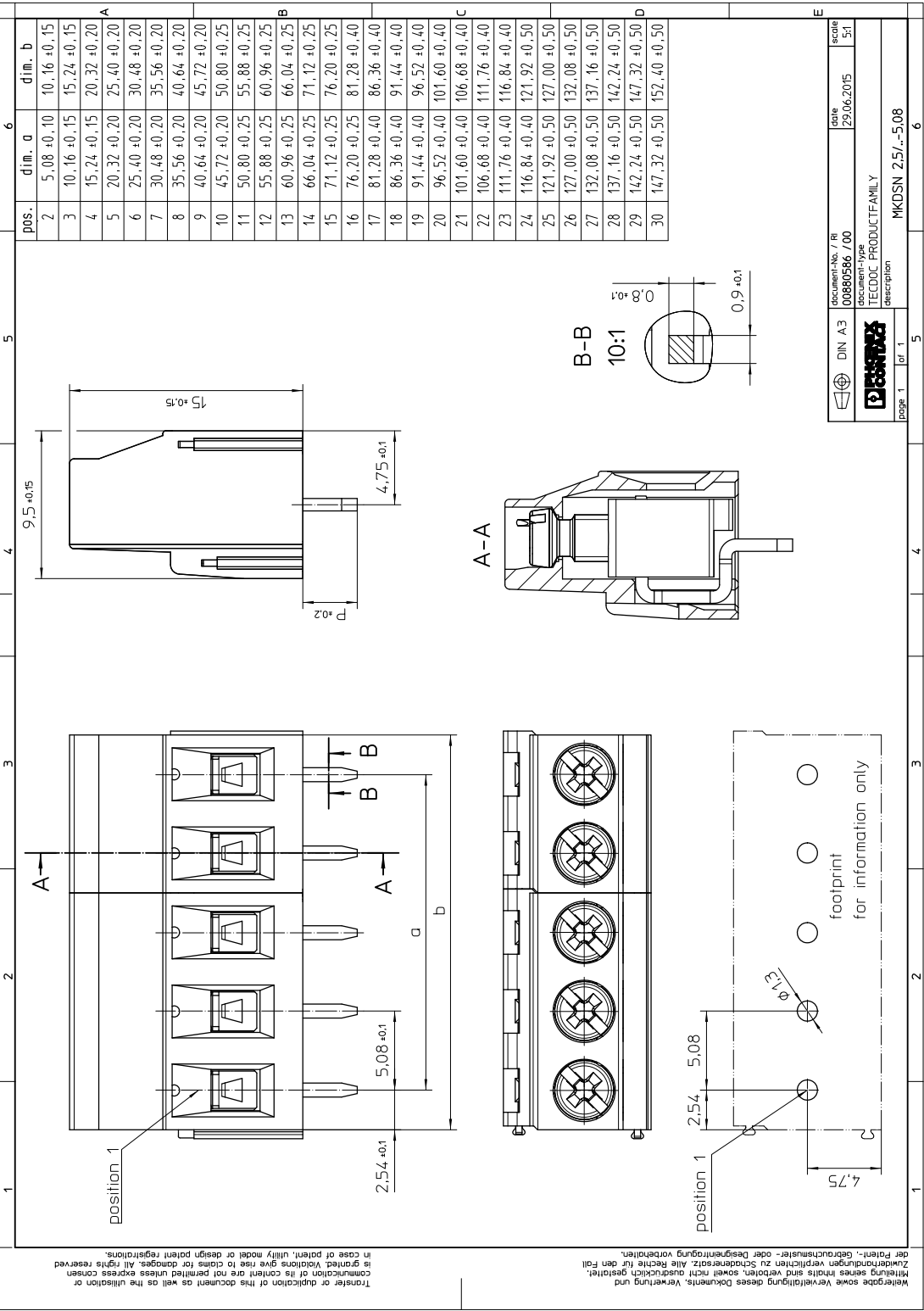
1888690 MKDSN 2,5/ 3-5,08

Length	9.5 mm
Width	15.24 mm
Height (without solder pin)	15 mm
Total height	18.5 mm
Solder pin [P]	3.5 mm
Dimension a	10.16 mm

6.2 Maßangaben für Leiterplatten-Design

Hole diameter	1.3 mm
Pin dimensions	0,8 x 0,9 mm

7 Series drawing



1888690 MKDSN 2,5/ 3-5,08

8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	250

9 Application

9.1 Temperature limit values

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

1888690 MKDSN 2,5/ 3-5,08**10 Mechanical tests****10.1 Torque test**

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Screw thread	M3
Tightening torque	0.5 Nm to 0.6 Nm

10.2 Check for damage to conductor or loosening

Specification	IEC 60998-2-1:1990-04
Result	Test passed

10.3 Pull-out test

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / stranded / > 10 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm ² / solid / > 50 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm ² / stranded / > 50 N

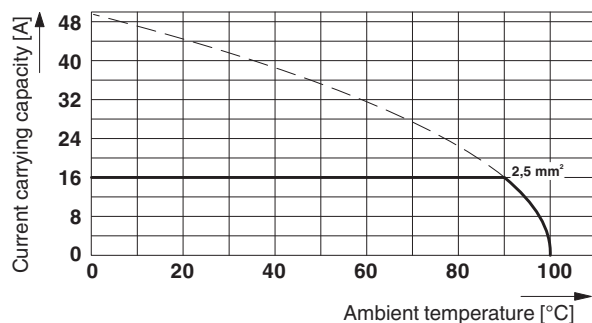
1888690 MKDSN 2,5/ 3-5,08**11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	16 A / 2.5 mm ²
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Contact resistance	0.35 mΩ
Degree of pollution	2

11.2 Temperature rise test

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K
Conductor cross section/test current/temperature rise	2.5 mm ² / 24 A / 26 K

Specification	IEC 60512-3:1976-01
Result	Test passed
Conductor cross section/test current/temperature rise	1.5 mm ² / 17.5 A / 30 K

Type: MKDSN 2,5/2**Test following DIN EN 60512-5-2:2003-01****Reduction factor = 1****No. of positions: 5**

1888690 MKDSN 2,5/ 3-5,08**12 Environmental and durability tests****12.1 Resistance to ageing, humidity and penetration of solids**

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Dry heat	168 h/85 °C
Damp heat	48 h/30 °C/92 %

12.2 Insulation resistance

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Insulation resistance, neighboring positions	10 ⁹ Ω

12.3 Test of the power frequency electric strength

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Test voltage between neighboring positions	3 kV

12.4 Glow-wire test

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

12.5 Mechanical strength/tumbling barrel

Specification	IEC 60998-2-1:1990-04
Result	Test passed
Height of fall	50 cm
Number of drop cycles	50

12.6 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
Test directions	X-, Y- and Z-axis

12.7 Protection against contact

1888690 MKDSN 2,5/ 3-5,08

Specification

DIN VDE 0106-100:1983-03

Note


unenclosed basic insulation - protected against finger contact with IP20 test finger in acc. with IEC 60529 when connected, above the PCB

13 Approvals

VDE Gutachten mit Fertigungsüberwachung mm²/AWG/kcmil 0.2-2.5

Voltage 250 V

Current 24 A

EAC cULus Recognized 

Use group B D

mm²/AWG/kcmil 30-12 30-12

Voltage 300 V 300 V

Current 20 A 10 A

1888690 MKDSN 2,5/ 3-5,08**14 Commercial Data**

Order No.	1888690
Type	MKDSN 2,5/ 3-5,08
Pieces per package	250
Net weight	4.351 g
GTIN	4017918157012
Customs tariff number	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

15 Accessories

Description	Order No.	Type
	0804293	SK 5,08/3,8:FORTL.ZAHLEN
Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip	1205053	SZS 0,6X3,5
Insertion bridge, fully insulated, for connectors with 5.0 or 5.08 mm pitch, no. of positions: 2	1733169	EBP 2- 5