

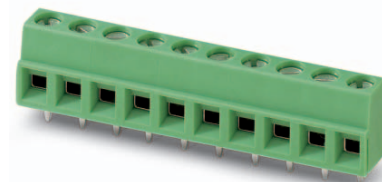
Data sheet

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Product version 07
Document revision 0

Order No.: 1729128

Type: MKDSN 1,5/ 2-5,08

PCB terminal block, Wave soldering, Screw connection with tension sleeve



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • Number of positions | 2 | • Nominal current | 13.5 A |
| • Conductor cross section | 1.5 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
- ✓ The latching on the side enables various numbers of positions to be combined



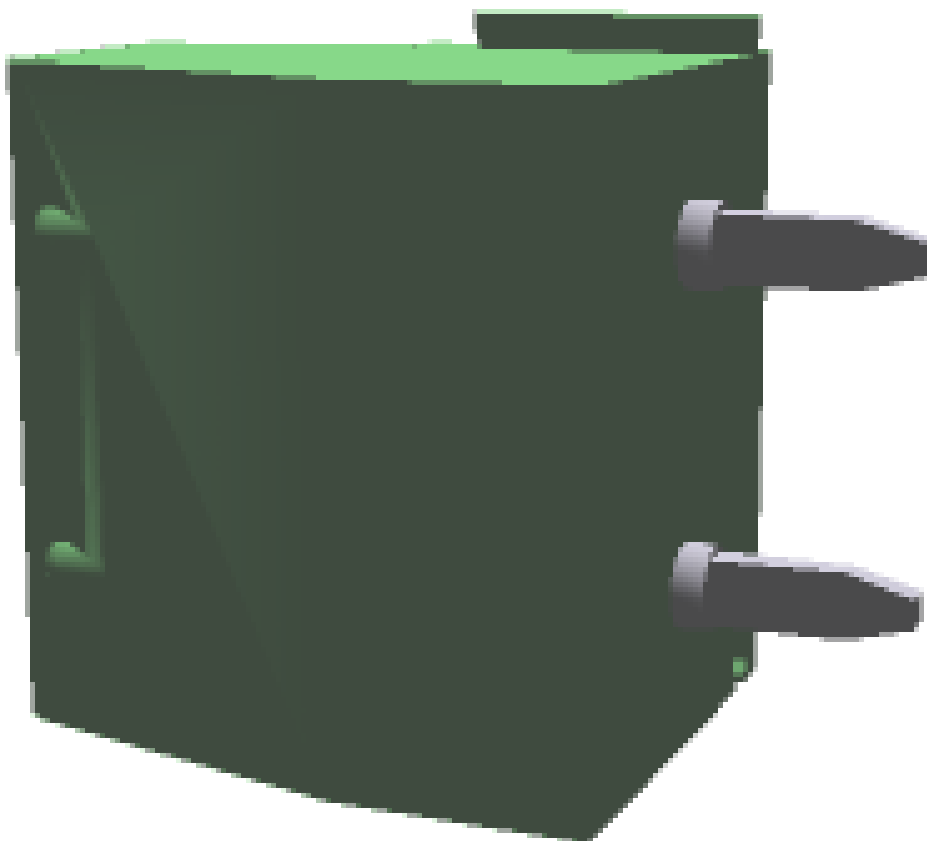
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It can be downloaded at: phoenixcontact.net/product/1729128

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



1729128 MKDSN 1,5/ 2-5,08**5 Item properties**

Order No.	1729128
Type	MKDSN 1,5/ 2-5,08
Range of articles	MKDSN 1,5
Pitch	5.08 mm
Number of positions	2
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
Mounting type	Wave soldering
Pin layout	Linear pinning

5.1 Connection capacity

Conductor cross section, solid	0.14 mm ² to 1.5 mm ²
Conductor cross section, flexible	0.14 mm ² to 1.5 mm ²
Conductor cross section AWG/kcmil	26 to 16
2 conductors with same cross section, solid	0.14 mm ² to 0.75 mm ²
2 conductors with same cross section, stranded	0.14 mm ² to 0.75 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² to 1 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² to 1.5 mm ²
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm ² to 0.5 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm ² to 0.75 mm ²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.9 mm
Stripping length	6 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	Sn	
Terminal point surface	Ni 1.3 µm ... 3 µm , Sn 3 µm ... 5 µm	
Soldering area surface	Ni 2 µm ... 3 µm , Sn 5 µm ... 7 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)	
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	

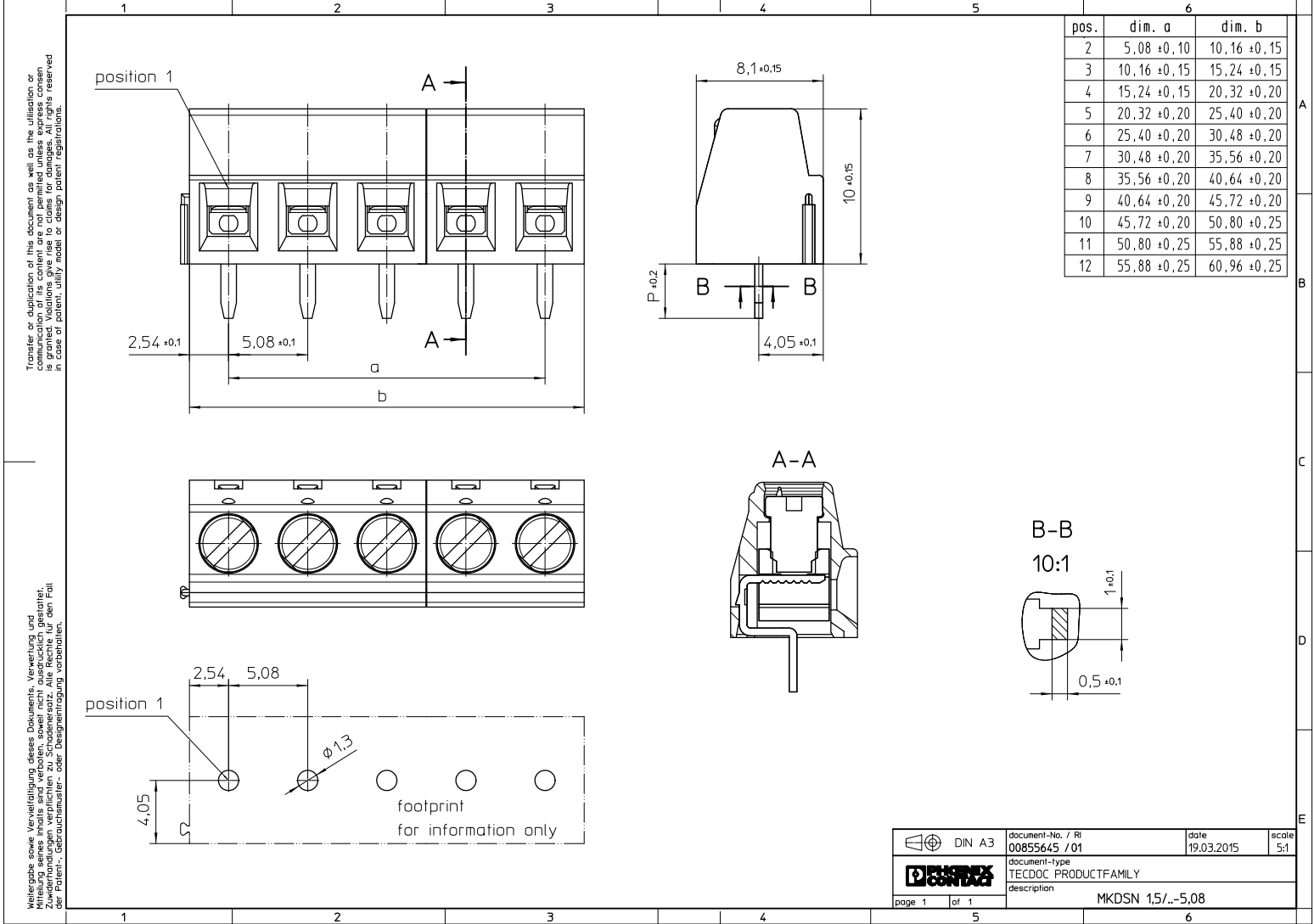
1729128 MKDSN 1,5/ 2-5,08**6 Dimensions****6.1 Maßangaben zum Produkt**

Length	8.1 mm
Width	10.16 mm
Height (without solder pin)	10 mm
Total height	13.5 mm
Solder pin [P]	3.5 mm
Dimension a	5.08 mm

6.2 Maßangaben für Leiterplatten-Design

Hole diameter	1.3 mm
Pin dimensions	0,5 x 1 mm

7 Series drawing



1729128 MKDSN 1,5/ 2-5,08**8 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	250

9 Application**9.1 Processing notes**

Process	Wave soldering
Specification	Following IEC 61760-1:2006-04
Specification	Following IEC 60068-2-54:2006-04

9.2 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)

1729128 MKDSN 1,5/ 2-5,08**10 Mechanical tests****10.1 Torque test**

Specification	IEC 60998-2-1:2002-12
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 60998-2-1:2002-12
Result	Test passed

10.3 Pull-out test

Specification	IEC 60998-2-1:2002-12
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.14 mm ² / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.14 mm ² / stranded / > 10 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm ² / solid / > 40 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm ² / stranded / > 40 N

1729128 MKDSN 1,5/ 2-5,08**11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	13.5 A / 1.5 mm ²
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Contact resistance	1.5 mΩ
Degree of pollution	2

11.2 Air clearances and creepage distances

Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	250 V	400 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	3 mm	3 mm	3 mm
Minimum value of the creepage path requirement in acc. with table	3.2 mm	2 mm	3.2 mm
Note on connection cross section	With connected conductor 1.5 mm ² (solid).		
Note			

11.3 Temperature rise test

Specification	IEC 60998-1:2002-12		
Result	Test passed		
Requirement temperature-rise test	Increase in temperature ≤ 45 K		
Conductor cross section/test current/temperature rise	1.5 mm ² / 13.5 A / 29 K		
Specification	Following IEC 60512-5-2:2002-02		
Result	Test passed		
Conductor cross section/test current/temperature rise	1.5 mm ² / 13.5 A / 30 K		

1729128 MKDSN 1,5/ 2-5,08

12 Current carrying capacity/derating curves

Specification

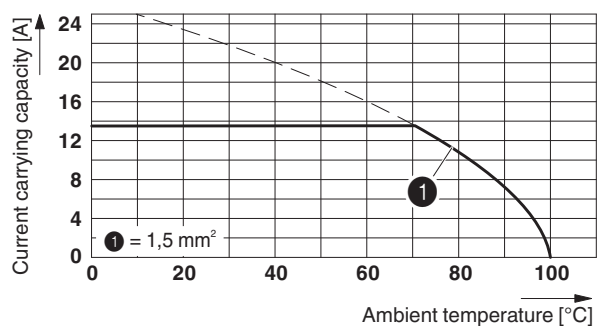
IEC 60512-5-2:2002-02

Reduction factor

1

Number of positions

5

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

1729128 MKDSN 1,5/ 2-5,08**13 Environmental and durability tests****13.1 Resistance to ageing, humidity and penetration of solids**

Specification	IEC 60998-1:2002-12
Result	Test passed
Dry heat	168 h/100°C
Damp heat	48 h/30 °C/92 %

13.2 Insulation resistance

Specification	IEC 60998-1:2002-12
Result	Test passed
Insulation resistance, neighboring positions	10 ⁹ Ω

13.3 Test of the power frequency electric strength

Specification	IEC 60998-1:2002-12
Result	Test passed
Test voltage between neighboring positions	3.5 kV

13.4 Glow-wire test

Specification	IEC 60998-1:2002-12
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

13.5 Mechanical strength/tumbling barrel

Specification	IEC 60998-1:2002-12
Result	Test passed
Height of fall	50 cm
Number of drop cycles	50

13.6 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

13.7 Protection against contact

1729128 MKDSN 1,5/ 2-5,08

Specification	IEC 61032:1997-12
Note	unenclosed basic insulation - protected against finger contact with IP20 test finger in acc. with IEC 60529 when connected, above the PCB

14 Approvals

CSA 				
Use group	B	D		
mm ² /AWG/kcmil	28-14	28-14		
Voltage	150 V	300 V		
Current	10 A	10 A		

SEV 				
mm ² /AWG/kcmil	1.5			
Voltage	250 V			
Current	13.5 A			

CCA				
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IECEE CB Scheme 				
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RS 				
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EAC 				
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cULus Recognized 				
Use group	B	D		
mm ² /AWG/kcmil	30-14	30-14		
Voltage	300 V	300 V		
Current	10 A	10 A		

CCA				
mm ² /AWG/kcmil	1.5			
Voltage	250 V			
Current	13.5 A			

IECEE CB Scheme 				
mm ² /AWG/kcmil	1.5			
Voltage	250 V			
Current	13.5 A			

DNV GL				
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1729128 MKDSN 1,5/ 2-5,08**15 Commercial Data**

Order No.	1729128
Type	MKDSN 1,5/ 2-5,08
Pieces per package	250
Net weight	1.8 g
GTIN	4017918025991
Customs tariff number	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

16 Accessories

Description	Order No.	Type
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
	0804293	SK 5,08/3,8:FORTL.ZAHLEN
	0805412	SK 5,08/3,8:UNBEDRUCKT
	0805085	SK 5,08/3,8:SO
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT