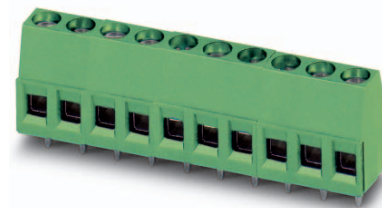


# Data sheet

Order No.: 1715721

Type: MKDS 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



- |                           |                                      |                        |                     |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos.             | 2                                    | • Nominal current      | 17.5 A              |
| • Conductor cross section | 1.5 mm <sup>2</sup>                  | • 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
- ✓ The latching on the side enables various numbers of positions to be combined



Make sure you always use the latest documentation.

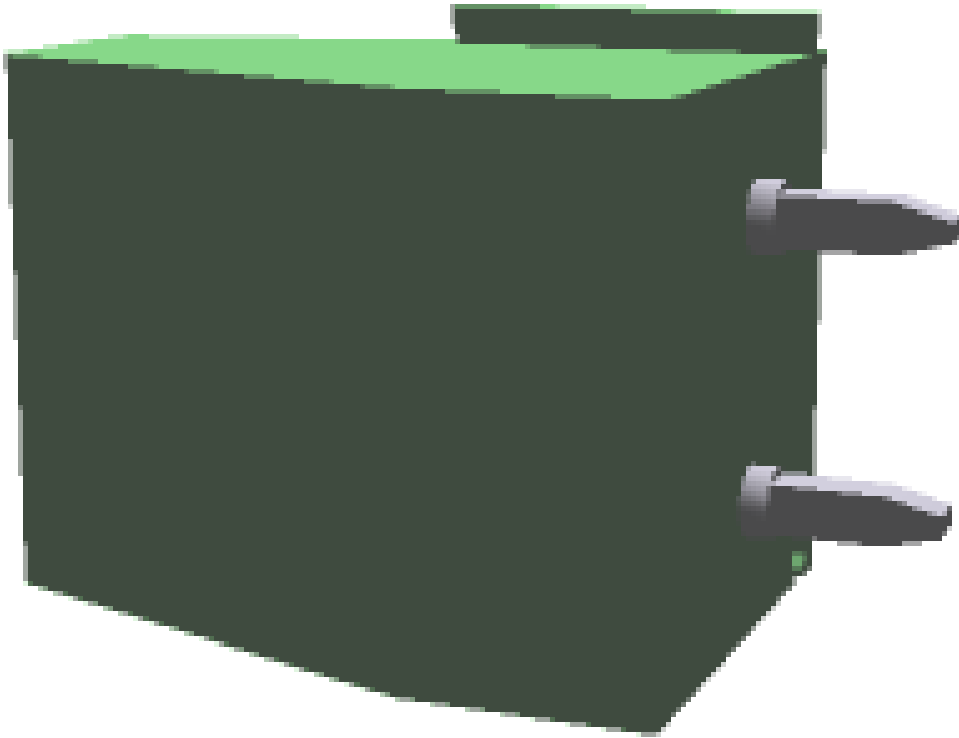
It can be downloaded at: [phoenixcontact.net/product/1715721](http://phoenixcontact.net/product/1715721)

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1715721 MKDS 1,5/ 2-5,08

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



**1715721 MKDS 1,5/ 2-5,08****5 item properties**

Order No.	1715721
Type	MKDS 1,5/ 2-5,08
Range of articles	MKDS 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
Product note	The article can be aligned to create different nos. of positions!

**5.1 Connection capacity**

Conductor cross section, solid	0.14 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.14 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil	26 to 14
2 conductors with same cross section, solid	0.14 mm <sup>2</sup> to 1 mm <sup>2</sup>
2 conductors with same cross section, stranded	0.14 mm <sup>2</sup> to 0.75 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> to 0.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm <sup>2</sup> to 1 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.9 mm
Stripping length	7 mm

**5.2 Material data**

<b>Material of metal parts</b>	
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
<b>Insulating material data</b>	
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

**1715721 MKDS 1,5/ 2-5,08****6 Dimensions****6.1 Dimensions for the product**

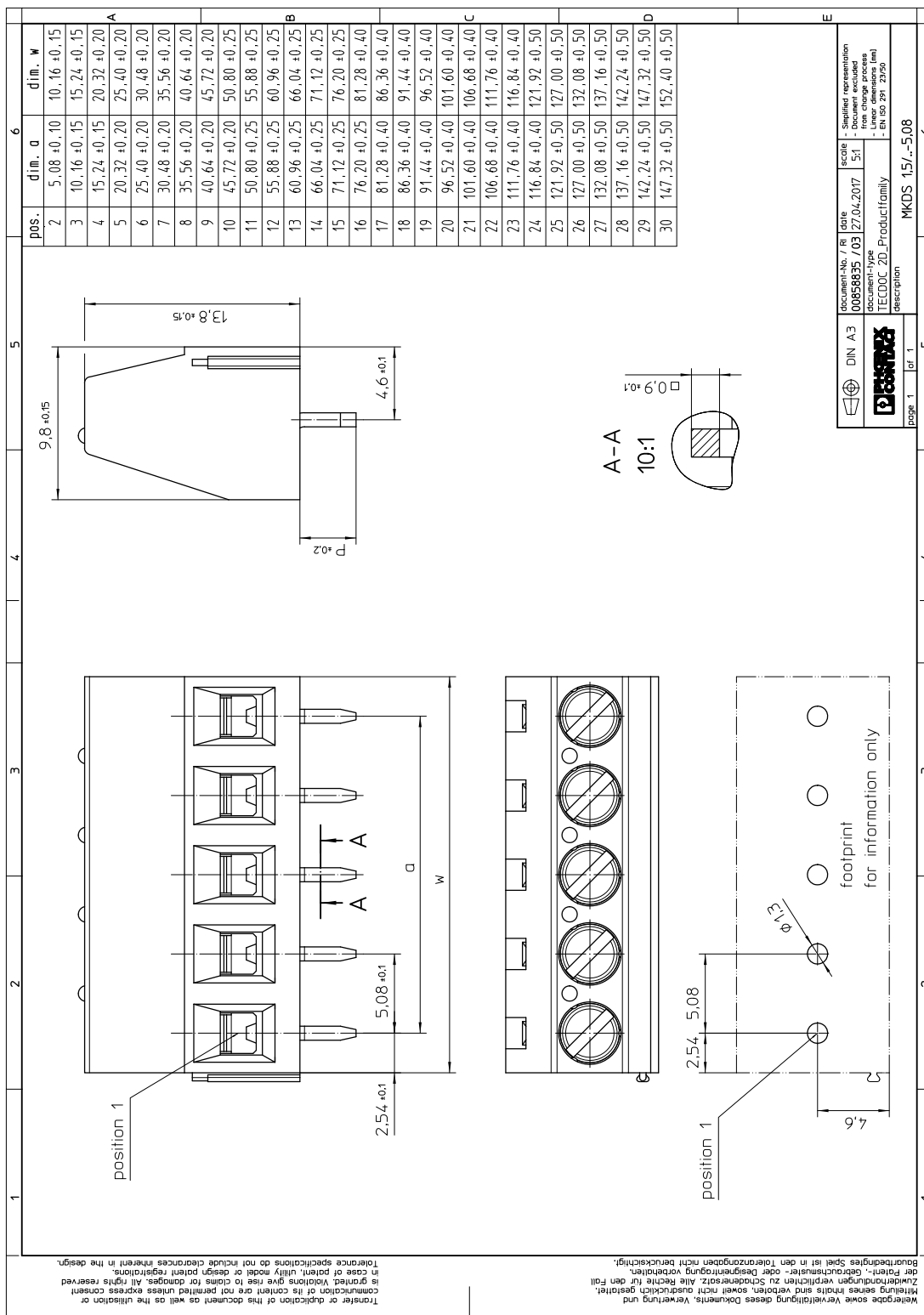
Length	9.8 mm
Width	10.16 mm
Height (without solder pin)	13.8 mm
Total height	17.3 mm
Solder pin [P]	3.5 mm
Dimension a	5.08 mm

**6.2 Dimensions for PCB design**

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

1715721 MKDS 1,5/ 2-5,08

7 Series drawing



**1715721 MKDS 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)

**1715721 MKDS 1,5/ 2-5,08****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	0.14 mm <sup>2</sup> / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.14 mm <sup>2</sup> / stranded / > 10 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm <sup>2</sup> / solid / > 50 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm <sup>2</sup> / stranded / > 40 N

**1715721 MKDS 1,5/ 2-5,08****11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	17.5 A / 1.5 mm <sup>2</sup>
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Contact resistance	0.5 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	3 mm	3.2 mm
Note on connection cross section	With connected conductor 2.5 mm <sup>2</sup> (solid).		
Note			

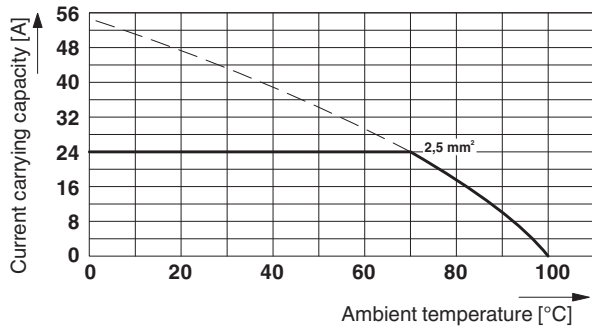
**11.3 Temperature rise test**

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 <sup>2</sup> / 24 A / 30 K

Specification	Following IEC 60512-5-2:2002-02
Result	Test passed
Conductor cross section/test current/temperature rise	2.5 mm <sup>2</sup> / 24 A / 29 K

**Type: MKDS 1,5/2 and MKDS 1,5/3****Test as per DIN EN 60512-5-2:2003-01**

**1715721 MKDS 1,5/ 2-5,08****Reduction factor = 1****No. of positions: 5**

**1715721 MKDS 1,5/ 2-5,08****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/100°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 <sup>9</sup> 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	3.5 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
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

**1715721 MKDS 1,5/ 2-5,08****13 Approvals****CSA** 


Use group	B	D		
mm <sup>2</sup> /AWG/kcmil	28-14	28-14		
Voltage	300 V	300 V		
Current	10 A	10 A		

**SEV** 

mm <sup>2</sup> /AWG/kcmil	2.5			
Voltage	250 V			
Current	24 A			

**CCA**

mm <sup>2</sup> /AWG/kcmil	2.5			
Voltage	250 V			
Current				

**EAC** **cULus Recognized** 

Use group	B	D		
mm <sup>2</sup> /AWG/kcmil	30-14	30-14		
Voltage	300 V	300 V		
Current	15 A	10 A		

**DNV GL**

**1715721 MKDS 1,5/ 2-5,08****14 Commercial Data**

Order No.	1715721
Type	MKDS 1,5/ 2-5,08
Pieces per package	250
Net weight	2.74 g
GTIN	4017918024192
	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
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
Pitch spacer, for adjusting the pitches between MKDS and GMKDS terminal blocks in mixed rows, 1.25 mm thick	1702048	RZ 1,25-MKDS 1,5
Insertion bridge, fully insulated, for connectors with 5.0 or 5.08 mm pitch, no. of positions: 2	1733169	EBP 2- 5



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