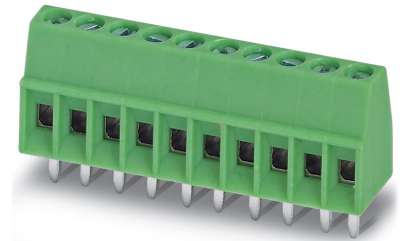


# Data sheet

Order No.: 1725685

Type: MPT 0,5/ 5-2,54

PCB terminal block, Screw connection with tension sleeve



The figure shows a 10-position version of the product

## 1 Main features



- |                           |                                      |                        |                     |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos.             | 5                                    | • Nominal current      | 6 A                 |
| • Conductor cross section | 0.5 mm <sup>2</sup>                  | • Nominal voltage      | 160 V               |
| • Color                   | green (6021)                         | • Connection direction | 0 °                 |
| • Pitch                   | 2.54 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



Make sure you always use the latest documentation.

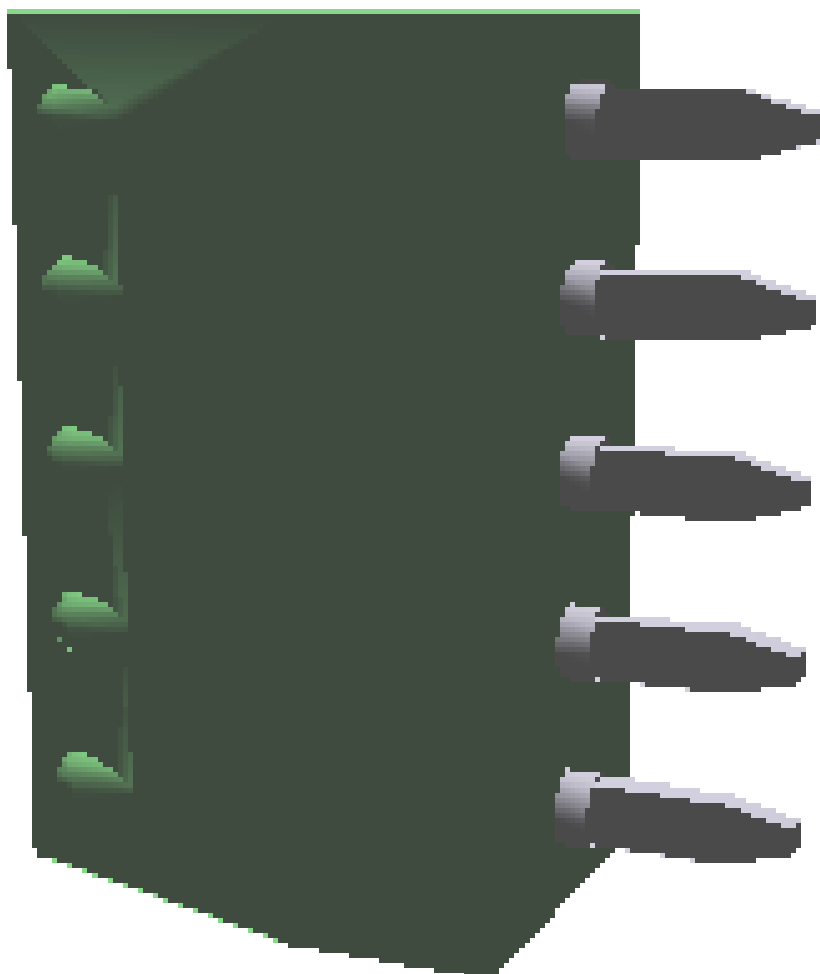
It can be downloaded at: [phoenixcontact.net/product/1725685](https://phoenixcontact.net/product/1725685)

### 3 Table of contents

1	Main features.....	1
2	Your advantages .....	1
3	Table of contents .....	2
4	3D model in PDF can be activated (Acrobat Reader only).....	3
5	General Technical Data .....	4
6	Conductor connection .....	5
7	Material properties.....	5
8	Dimensions.....	6
9	Series drawing.....	7
10	Product notes .....	8
11	Application.....	8
12	Packaging information .....	8
13	Mechanical tests.....	9
14	Electrical tests .....	10
15	Current carrying capacity/derating curves .....	12
16	Environmental and durability tests .....	13
17	Approvals / Certificates.....	14
18	Commercial Data.....	15
19	Accessories.....	15

1725685 MPT 0,5/ 5-2,54

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



**1725685 MPT 0,5/ 5-2,54****5 General Technical Data****5.1 item properties**

Item no.	1725685
Type	MPT 0,5/ 5-2,54
Product type	PCB terminal block
Range of articles	MPT 0,5
Pitch	2.54 mm
Number of positions	5
Number of rows	1
Number of connections	5
Number of potentials	5
Connection method	Screw connection with tension sleeve
Screw thread	M1,6
Drive form screw head	Slotted (L)
Mounting type	Wave soldering
Connection direction of the conductor to the PCB	0 °
Pin layout	Linear pinning
Solder pins per potential	1
Type	PC termination block

**1725685 MPT 0,5/ 5-2,54****6 Conductor connection****6.1 Connection capacity**

Conductor cross section, rigid	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section, flexible	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
2 conductors with same cross section, solid	0.14 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
2 conductors with same cross section, stranded	0.14 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	-
2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve	-
Stripping length	4.5 mm
Tightening torque	0.12 Nm ... 0.15 Nm

**6.2 Connection capacity AWG**

Conductor cross section AWG	26 ... 20
-----------------------------	-----------

**7 Material properties****7.1 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	Nickel (2 - 3 µm Ni) , Tin (5 - 7 µm Sn)
Soldering area surface	Nickel (2 - 3 µm Ni) , Tin (5 - 7 µm Sn)
Surface characteristics	Tin-plated

**7.2 Material of plastic parts**

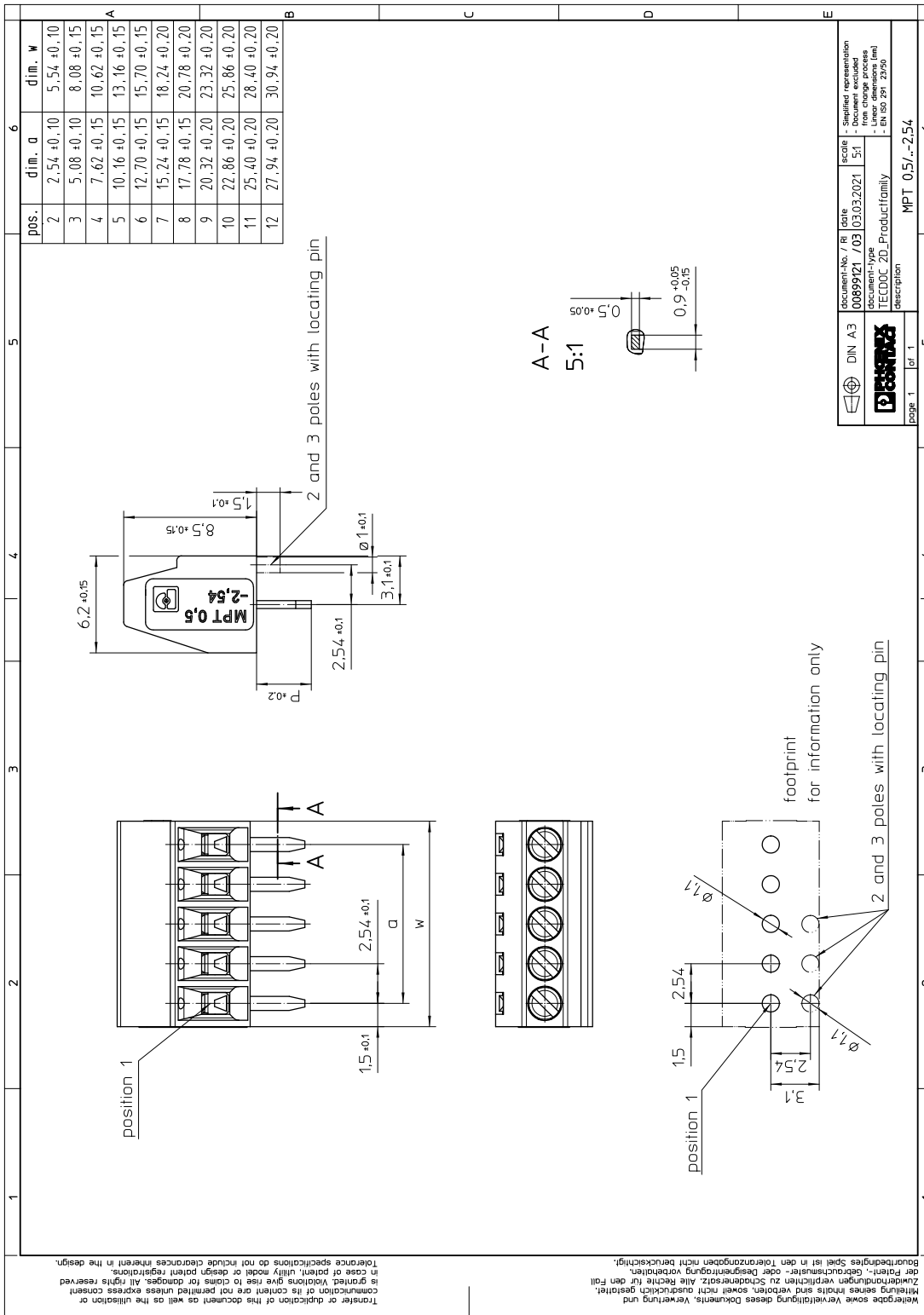
	<b>Housing</b>
Color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

**1725685 MPT 0,5/ 5-2,54****8 Dimensions****8.1 Dimensions for the product**

Length	6.2 mm
Width	13.16 mm
Height (without solder pin)	8.5 mm
Total height	12 mm
Solder pin [P]	3.5 mm

1725685 MPT 0,5/ 5-2,54

9 Series drawing



**1725685 MPT 0,5/ 5-2,54****10 Product notes****10.1 General information**

Note on application

For safe conductor connection, always adhere to a defined tightening torque. Particularly in the case of PCB terminal blocks with two or three positions, the individual solder pin for each contact point cannot compensate for this. That is why the terminal blocks must be supported during conductor connection (held with one hand, support on the housing).

**10.2 Dimensions for PCB design**

Hole diameter	1.1 mm
Pin dimensions	0.5 x 0.9 mm

**11 Application****12 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	250

**12.1 Temperature limit values**

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (Depending on the current carrying capacity/derating curve)



**1725685 MPT 0,5/ 5-2,54****13 Mechanical tests****13.1 Pull-out test**

Specification	IEC 60999-1:1999-11
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> / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm <sup>2</sup> / solid / > 20 N
Conductor cross section/conductor type/tractive force actual value	0.5 mm <sup>2</sup> / flexible / > 20 N

**13.2 Check for damage to conductor or loosening**

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

**1725685 MPT 0,5/ 5-2,54****14 Electrical tests**

Rated current / conductor cross section	6 A / 0.5 mm <sup>2</sup>
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	2.64 mΩ
Degree of pollution	2

**14.1 Air and creepage distances**

Component	PCB terminal block		
Specification	IEC 60947-1:2007-06 + A1:2010-12 + A2:2014-09		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	63 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	1.5 mm	1.5 mm	1.5 mm
Minimum value of the creepage path requirement in acc. with table	1.6 mm	1.5 mm	1.6 mm

**14.2 Short-time withstand current test**

Specification	IEC 60947-7-4:2019-01
Result	Test passed
Conductor cross section/short-time current	0.5 mm <sup>2</sup> / 54 A

**14.3 Aging test (climatic impact and corrosion testing)**

Specification	IEC 60947-7-4:2019-01
Result	Test passed
Contact resistance R <sub>1</sub>	2.64 mΩ / 0.5 mm <sup>2</sup>
Test sequence 1: low temperature storage	-40 °C / 2 h
Test sequence 2: heat storage	168 h/105 °C
Test sequence 3: noxious gas storage (ISO 6988)	KFW 0.2 S/1 cycle
Contact resistance R <sub>2</sub>	3.77 mΩ / 0.5 mm <sup>2</sup>
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	2.95 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	1.4 kV

**14.4 Insulation resistance**

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

**1725685 MPT 0,5/ 5-2,54****14.5 Mechanical connection test for the PCB terminal block**

Specification	IEC 60947-7-4:2019-01
Result	Test passed

**14.6 Temperature rise test**

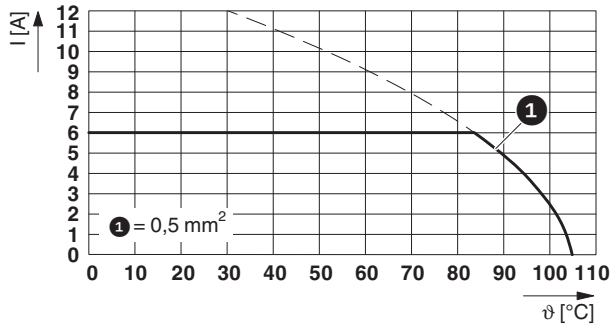
Specification	IEC 60947-7-4:2019-01
Result	Test passed
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.
Conductor cross section/test current/temperature rise	0.5 mm <sup>2</sup> / 6 A / 21.5 K

## 1725685 MPT 0,5/ 5-2,54

## 15 Current carrying capacity/derating curves

Specification	IEC 60947-7-4:2019-01
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	4
Conductor cross section	0.5 mm <sup>2</sup>

Type: MPT 0,5/...-2,54







**1725685 MPT 0,5/ 5-2,54****16 Environmental and durability tests****16.1 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	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Note	

**16.2 Assessment of fire risk (glow wire test)**

Specification	IEC 60695-2-10:2013-04		
Result	Test passed		
Temperature	850 °C		
Time of exposure	5 s		

**1725685 MPT 0,5/ 5-2,54****17 Approvals / Certificates**

CSA 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
	125 V	6 A	28 - 20	-
EAC 				
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
	125 V	6 A	30 - 20	-
VDE Zeichengenehmigung 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
	160 V	6 A	-	0.14 - 0.5

**1725685 MPT 0,5/ 5-2,54****18 Commercial Data**

Item no.	1725685
Type	MPT 0,5/ 5-2,54
Pieces per package	250
Net weight	1.4 g
GTIN	4017918116286
	Information that applies locally, see link on page 1

**19 Accessories**

Description	Order No.	Type
Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap	1205202	SZS 0,4X2,0
	0804853	SK 2,54/2,8:FORTL.ZAHLEN
	0803883	SK U/2,8 WH:UNBEDRUCKT
	0804879	SK 2,54/2,8:SO
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT