2017-11-13
Product version 03
Document revision 0

Data sheet

Order No.: 1719341

Type: SPT 5/ 5-V-7,5-ZB

PCB terminal block, Push-in spring connection

1 Main features

- No. of pos. 5
- Conductor cross section 6 mm²
- Color green
- Pitch 7.5 mm
- Connection method Push-in spring connection
- Nominal current 41 A
- Nominal voltage 1000 V
- Connection direction 90 °
- Type of packaging packed in cardboard

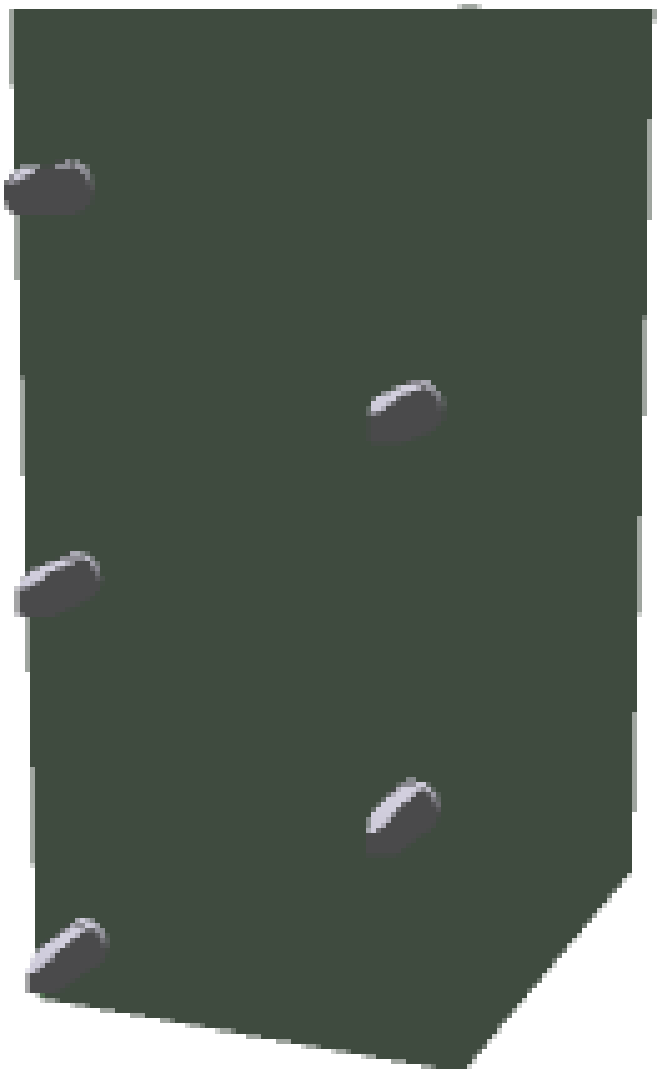
2 Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- Vertical connection enables multi-row arrangement on the PCB

Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1719341

3 Table of contents

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



5 item properties

Order No.	1719341
Type	SPT 5/ 5-V-7,5-ZB
Range of articles	SPT 5/..-V
Pitch	7.5 mm
Number of positions	5
Connection method	Push-in spring connection
Mounting type	Wave soldering
Pin layout	ZB - Zig-zag back pinning W

5.1 Connection capacity

Conductor cross section, solid	0.2 mm² to 10 mm²
Conductor cross section, flexible	0.2 mm² to 6 mm²
Conductor cross section AWG/kcmil	24 to 8
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² to 6 mm²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm² to 4 mm²
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.25 mm² to 1.5 mm²
Stripping length	15 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	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	

6 Dimensions

6.1 Dimensions for the product

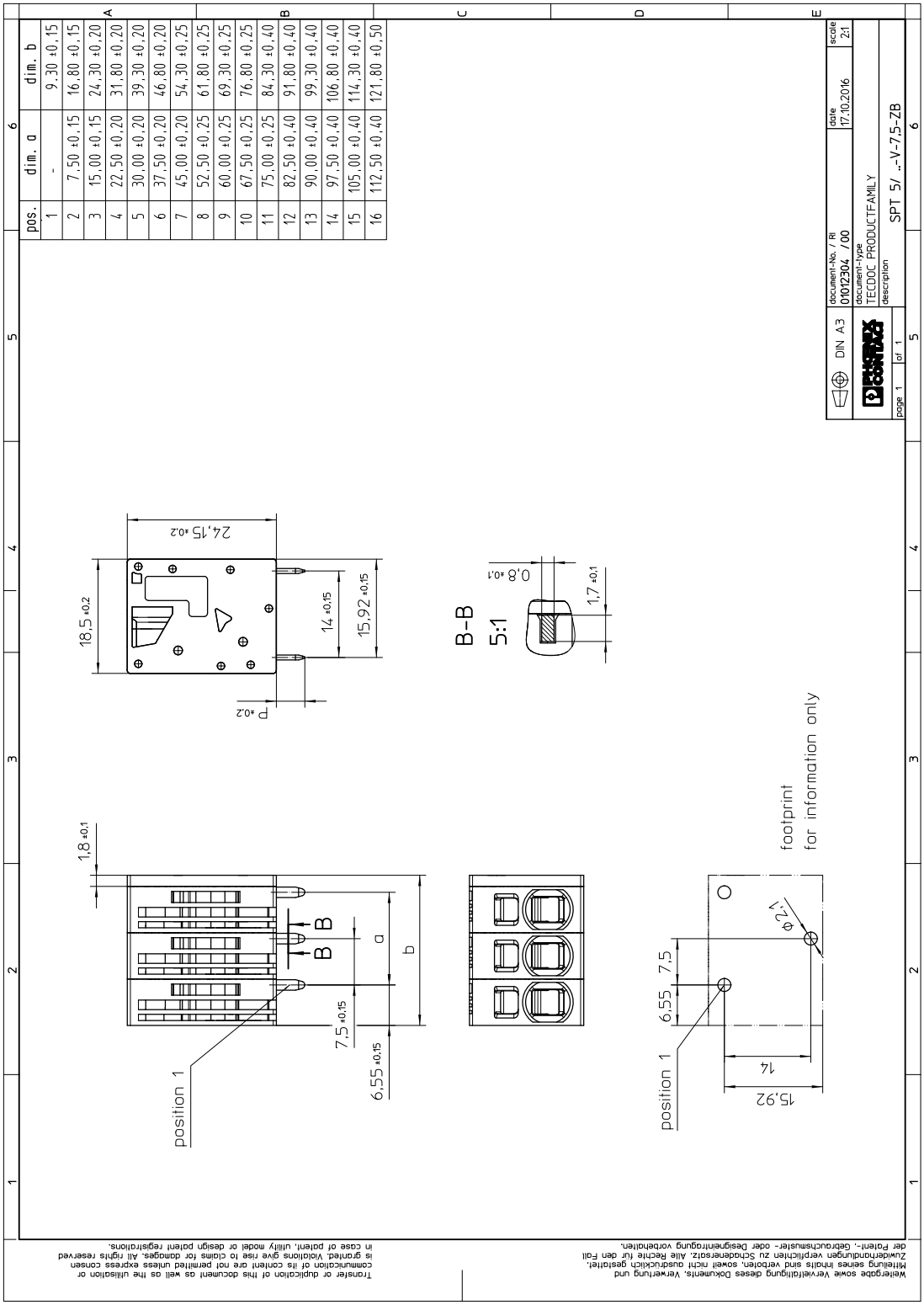
Length	18.5 mm
Width	39.3 mm
Height (without solder pin)	14.4 mm
Total height	19 mm
Solder pin [P]	4.6 mm
Dimension a	30 mm

6.2 Dimensions for PCB design

Hole diameter	2.1 mm
Pin dimensions	1,7 x 0,8 mm
Pin spacing	14 mm

1719341 SPT 5/ 5-V-7,5-ZB

7 Series drawing



8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

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)

10 Mechanical tests

10.1 Connection test

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

10.2 Electrical performance test

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

10.3 Check for damage to conductor or loosening

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

10.4 Pull-out test

Specification	IEC 60998-2-2:2002-12
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	10 mm^2 / solid / > 90 N
Conductor cross section/conductor type/tractive force actual value	6 mm^2 / stranded / > 80 N

10.5 Bending test

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

11 Electrical tests

11.1 Electrical data

Rated current / conductor cross section	41 A / 6 mm²
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Contact resistance	0.4 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	800 V	1000 V	1000 V
Rated surge voltage	8 kV	8 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	8 mm	8 mm	5.5 mm
Minimum value of the creepage path requirement in acc. with table	10 mm	8 mm	5.5 mm
Note on connection cross section			
Note			

11.3 Temperature rise test

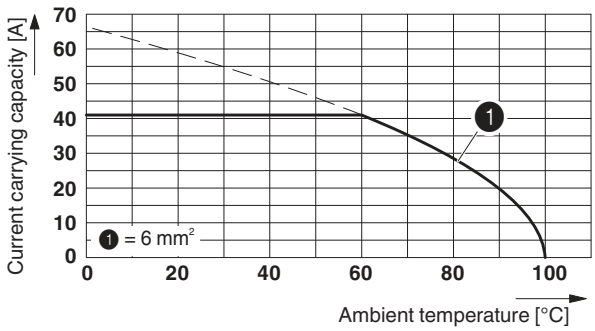
Specification	IEC 60998-2-1:2002-12
Result	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K
Conductor cross section/test current/temperature rise	10 mm² / 57 A / 44 K

Specification	Following IEC 60512-5-2:2002-02
Result	Test passed
Conductor cross section/test current/temperature rise	6 mm² / 41 A / 40 K

12 Current carrying capacity/derating curves

Specification	IEC 60512-5-2:2002-02
Reduction factor	1
Number of positions	5

Type: SPT 5/...-V-7,5-ZB
Test following DIN EN 60512-5-2:2003-01
Reduction factor = 1
No. of positions: 5



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 GΩ

13.3 Test of the power frequency electric strength

Specification	IEC 60998-1:2002-12
Result	Test passed
Test voltage between neighboring positions	7.5 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 Testing in a saturated atmosphere in the presence of sulfur dioxide

1719341 SPT 5/ 5-V-7,5-ZB

Specification	DIN 50018-EN:1997-06
Result	Test passed
Corrosive stress	KFW 1.0 S/1 cycle
Conductor cross section	0.2 mm² to 6 mm²

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 Type approval and special tests

15 Approvals

UL Recognized				
Use group	B	C		
mm²/AWG/kcmil	24-8	24-8		
Voltage	600 V	600 V		
Current	36 A	36 A		
SEV				
mm²/AWG/kcmil	6			
Voltage	1000 V			
Current	41 A			
cUL Recognized				
Use group	B	C		
mm²/AWG/kcmil	24-8	24-8		
Voltage	600 V	600 V		
Current	36 A	36 A		
CCA				
mm²/AWG/kcmil	6			
Voltage	1000 V			
Current	41 A			
IECEE CB Scheme				
mm²/AWG/kcmil	6			
Voltage	1000 V			
Current	41 A			
EAC				
cULus Recognized				

16 Commercial Data

Order No.	1719341
Type	SPT 5/ 5-V-7,5-ZB
Pieces per package	50
Net weight	18.69 g
GTIN	4046356141444
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

17 Accessories

Description	Order No.	**Type**
Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip	1204517	SZF 1-0,6X3,5
	1701535	RZ-SPT 5-4 V
Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm^2 ... 6.0 mm^2, lateral entry, trapezoidal crimp	1212034	CRIMPFOX 6
	0804455	SK 7,5/3,8:FORTL.ZAHLEN
	0825127	SK 3,8 REEL P7,5 WH CUS