2022-06-01
Product version 02
Document revision 00

Data sheet

Item No.: 1755583

Type: PT 1,5/ 2-PH-5,0

PCB connector, Screw connection with tension sleeve

The figure shows a 10-position version of the product

1 Main features

- No. of pos. 2
- Conductor cross section 1.5 mm²
- Color green (6021)
- Pitch 5 mm
- Connection method Screw connection with tension sleeve
- Nominal current 10 A
- Nominal voltage 400 V
- Connection direction 0 °
- Type of packaging packed in cardboard

2 Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- High terminal block capacity thanks to rectangular terminal block space

Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1755583

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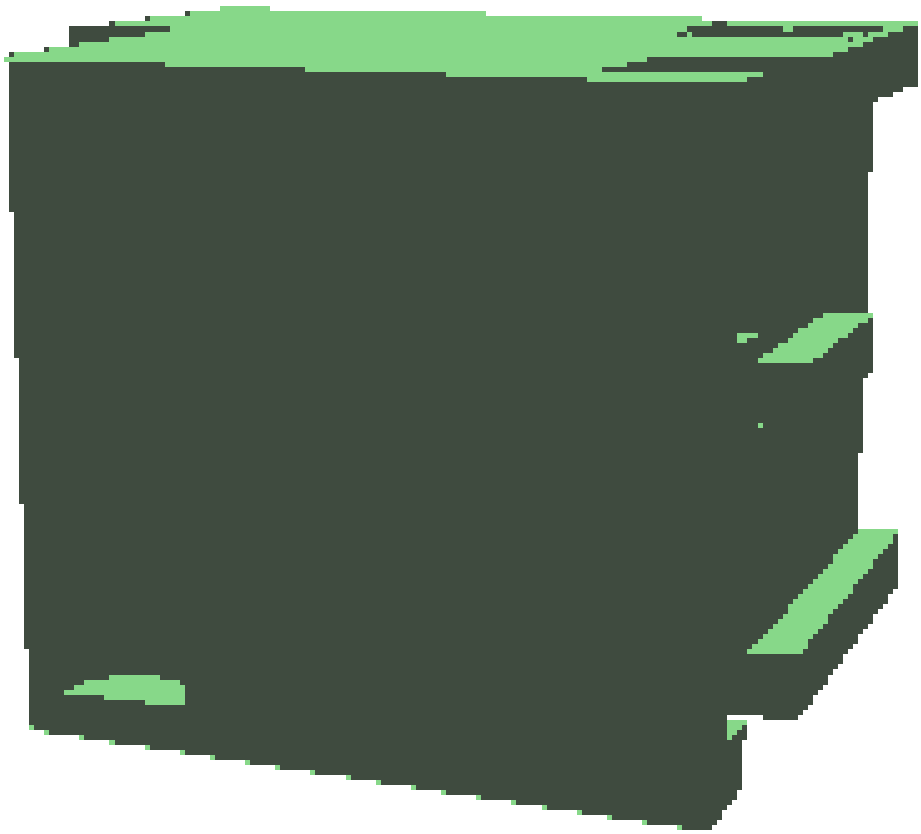
4 3D model in PDF can be activated (Acrobat Reader only)



5 General Technical Data

5.1 item properties

Item no.	1755583
Type	PT 1,5/ 2-PH-5,0
Product line	COMBICON Connectors S
Connector system	COMBICON PST 1,3
Product type	PCB connector
Type of contact	Female connector
Range of articles	PT 1,5/..-PH
Pitch	5 mm
Number of positions	2
Number of rows	1
Number of connections	2
Number of potentials	2
Connection method	Screw connection with tension sleeve
Screw thread	M2,6
Drive form screw head	Philipps recess with slotted Torx (H1L)
Connection direction of the conductor to plug-in direction	0 °
Type	Plug for pin strip

6 Mounting

6.1 Flange mounting

Type of locking	without
Mounting flange	without

7 Conductor connection

7.1 Connection capacity

Nominal cross section	1.5 mm²
Conductor cross section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1 mm²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm² ... 1 mm²
Stripping length	6 mm
Tightening torque	0.35 Nm ... 0.4 Nm

7.2 Connection capacity AWG

Conductor cross section AWG	26 ... 12

8 Material properties

8.1 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	Tin (4 - 8 µm Sn)
Surface contact area	Tin (4 - 8 µm Sn)
Surface characteristics	hot-dip tin-plated

8.2 Material of plastic parts

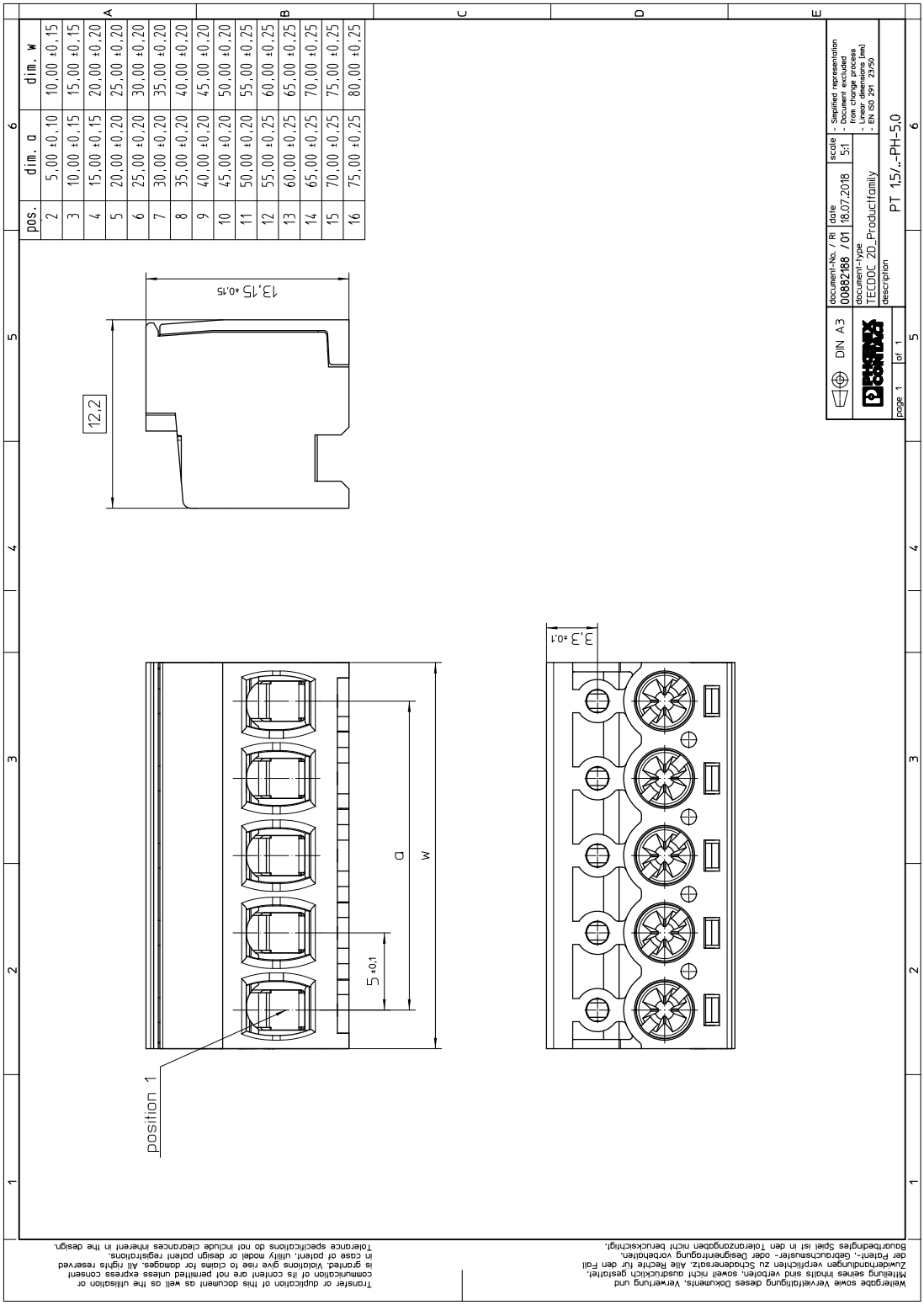
	Housing
Color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the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

9 Dimensions

9.1 Dimensions for the product

Length	12.2 mm
Width	10 mm
Installed height	13.15 mm
Total height	13.15 mm

10 Series drawing



11 Packaging information

Type of packaging	packed in cardboard
Pieces per package	250

12 Application

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 ... 100 °C (dependent on the derating curve)

13 General tests

13.1 Specification

Specification	IEC 61984
Specification	IEC 60999-1
Brief description	Printed-circuit board connector

14 Mechanical tests

14.1 Check for damage to conductor or loosening

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

14.2 Pull-out test

Specification	IEC 60999-1:1999-11
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 / flexible / > 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 / flexible / > 50 N

14.3 Torque test

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

14.4 Visual examination

Specification	IEC 61984:2001-06
Visual examination	Test passed
Specification	IEC 60512-1-1:2002-02

14.5 Dimensional test

Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02

14.6 Resistance of marking

Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12

14.7 Polarization and coding

1755583 PT 1,5/ 2-PH-5,0

Polarization when inserted
Requirement >20 N

Specification

15 Insertion and withdrawal forces

Insertion and withdrawal force	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	10
Insertion strength per pos. approx.	4.5 N
Withdraw strength per pos. approx.	5.5 N

16 Electrical tests

Rated current / conductor cross section	10 A / 1.5 mm²
Rated insulation voltage (III/2)	400 V
Rated surge voltage (III/2)	4 kV
Contact resistance	2.2 mΩ
Degree of pollution	2

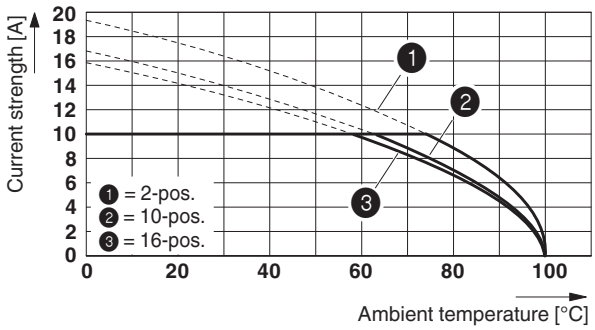
17 Air and creepage distances

Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112)	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

18 Current carrying capacity/derating curves

Specification	IEC 61984:2001-06
Note	Representation based on IEC 60512-5-2:2002-02
Note	For number of positions, see diagram
Reduction factor	0.8
Conductor cross section	1.5 mm²

Derating curve for: PT 1,5/...-PH-5,0 with PST 1,3/...5,0



19 Environmental and durability tests

19.1 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	The connected conductor loops were guided to the test sample at a distance of approx. 10 cm.

19.2 Insulation resistance

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

20 Type approval and special tests

21 Classification for connectors

Specification	IEC 61984:2001-06
Main features	Connectors without switching capacity (COC)
Construction form	free connector
Strain relief elements	without strain relief
Connection method	Can be reconnected
Protection against electric shock	Not encapsulated - touch-proof when inserted
Protective conductor	without PE
Locking	no
Connection method	Screw terminal points

22 Approvals / Certificates

IECEE CB Scheme	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm²]
	320 V	10 A	-	0.2 - 1.5

EAC

cULus Recognized	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm²]
Usegroup B				
	300 V	10 A	28 - 14	-
Usegroup D				
	300 V	10 A	28 - 14	-

VDE Zeichengenehmigung	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm²]
	320 V	10 A	-	0.2 - 1.5

23 Commercial Data

Item no.	1755583
Type	PT 1,5/ 2-PH-5,0
Pieces per package	250
Net weight	2.468 g
GTIN	4046356334129
	Information that applies locally, see link on page 1

24 corresponding headers

Item no.	Type
1720301	PST 1,3/ 2-5,0 R24
1933189	PST 1,3/ 2-5,0
1995635	PST 1,3/ 2-H-5,0

25 Accessories

Description	Item No.	Type
Coding profile, inserted into the groove on the plug, made from red insulating material, diameter: 1.35 mm	1731361	CP-PTDA
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

26 Combination tests

PT 1,5/..-PH	**PST 1,3/..-V**			
IEC 61984	IEC 61984			
Mechanical tests (A)				
Insertion/withdrawal force per position	approx. 4.5 N / 5.5 N			
Durability tests (B)				
Contact resistance R_1 1st level	2.2 mΩ			
Contact resistance R_1 2nd level				
Insertion/withdrawal cycles	10			
Contact resistance R_2	2.4 mΩ			
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV			
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV			
Insulation resistance Requirements > 5 MΩ	1 GΩ			
Thermal tests (C)				
Tested number of positions	16			
Tested conductor cross section	2.5 mm^2			
Test current	10 A			
Upper limiting temperature Requirements < 100°C	Test passed			
Climatic tests (D)				
Test sequence 1: low temperature storage	-40 °C/2 h			
Test sequence 2: heat storage	100 °C/168 h			
Test sequence 3: noxious gas storage (ISO 6988)	0.2 dm^3 SO_2 on 300 dm^3/ 40 °C/1 cycle			
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	4.8 kV			
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV			
Environmental and endurance tests (E)				
Specification	IEC 61984:2001-06			
Degree of protection	Finger safety with IP20 test finger			