2019-02-04
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Document revision 00

Data sheet

Order No.: 1716925

Type: LPC 6/ 5-ST-7,62

PCB connector, Push-in spring connection



1 Main features



- No. of pos. 5
- Conductor cross section 6 mm²
- Color green (6021)
- Pitch 7.62 mm
- Connection method Push-in spring connection
- Nominal current 41 A
- Nominal voltage 1000 V
- Connection direction 0 °
- Type of packaging packed in cardboard

2 Your advantages

- Tool-free lever principle enables time-saving connection and release of conductors with/without ferrules
- Clear lever positions provide reliable feedback on opened or closed clamping spaces
- Defined contact force ensures that contact remains stable over the long term
- Time-saving push-in connection when lever is closed

Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1716925

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



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5 General Technical Data

Order No.	1716925
Type	LPC 6/ 5-ST-7,62
Plug-in system	POWER COMBICON 6
Product type	PCB connector
Type of contact	Female connector
Range of articles	LPC 6/..-ST
Pitch	7.62 mm
Range of positions	2...6
Number of positions	5
Number of levels	1
Number of connections	5
Number of potentials	5
Connection method	Push-in spring connection
Type of locking	without
	without

5.1 item properties

Order No.	1716925
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Plug-in system	POWER COMBICON 6
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Pitch	7.62 mm
Range of positions	2...6
Number of positions	5
Number of levels	1
Number of connections	5
Number of potentials	5
Connection method	Push-in spring connection
Type of locking	without
	without

5.2 Connection capacity

Conductor cross section, solid	0.75 mm² ... 10 mm²
Conductor cross section, flexible	0.75 mm² ... 6 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.75 mm² ... 6 mm²
Conductor cross section flexible, with ferrule with plastic sleeve	0.75 mm² ... 6 mm²
Cylindrical gauge a x b / diameter	4.3 mm x 4.0 mm / 4.0 mm
Stripping length	18 mm

5.3 Connection capacity AWG

Conductor cross section AWG	18 ... 8

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5.4 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	Tin (4 - 8 µm Sn)	
Surface contact area	Tin (4 - 8 µm Sn)	
Surface characteristics	Tin-plated	

Insulating material data	Housing	Actuation element
Insulating material	PA GF	PA GF
Insulating material group	I	I
CTI according to IEC 60112	600	600
Flammability rating according to UL 94	V0	V0
Color	green (6021)	

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6 Dimensions

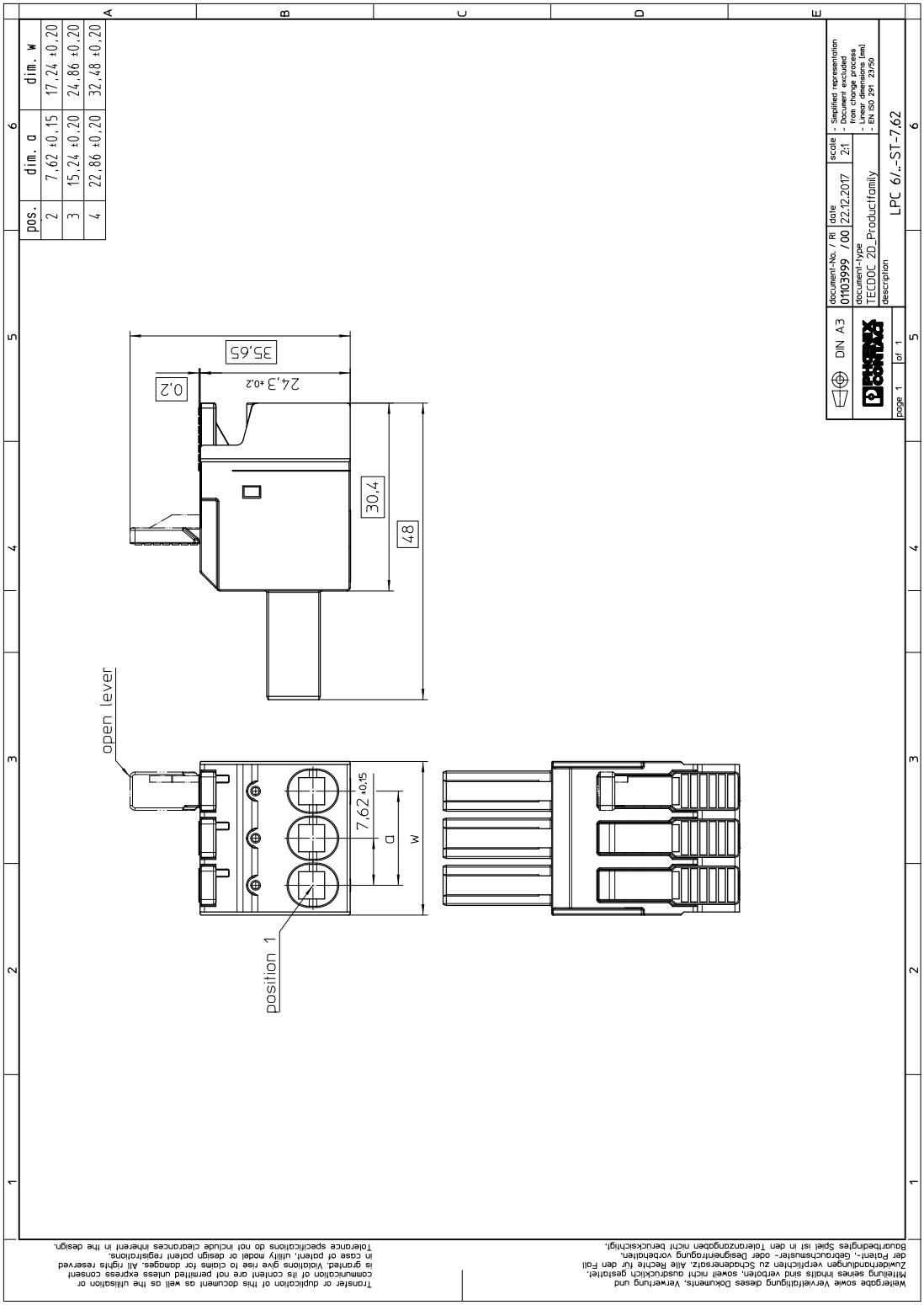
6.1 Dimensions for the product

Length	48 mm
Width	40.1 mm
Height (without solder pin)	35.65 mm
Total height	35.65 mm
Dimension a	30.48 mm

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1716925 LPC 6/ 5-ST-7,62

7 Series drawing



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8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	25

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 (dependent on the derating curve)

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10 General tests

10.1 Specification

Specification	IEC 61984
Specification	IEC 60999-1

11 Mechanical tests

11.1 Check for damage to conductor or loosening

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

11.2 Pull-out test

Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.75 mm^2 / solid / > 30 N
Conductor cross section/conductor type/tractive force actual value	0.75 mm^2 / flexible / > 30 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 / flexible / > 80 N

11.3 Repeated connection and disconnection

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

11.4 Conductor connection

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

11.5 Mechanical test group A

Specification	IEC 61984:2008-10
Visual examination	Test passed
Specification	IEC 60512-1-1:2002-02
Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02
Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12
Insertion and withdrawal force	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	11 N
Withdraw strength per pos. approx.	10 N
Polarization and coding	Test passed

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Specification	IEC 60512-13-5:2006-02
Test force	20 N
Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	20 N

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12 Electrical tests

12.1 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	0.5 mΩ
Degree of pollution	2

12.2 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 60112:2003-01)	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	5 mm	5 mm

12.3 Electrical function

Specification	IEC 60999-1:1999-11
Result	Test passed
Voltage drop	Voltage drop (U) after the load ≤ 15 mV
Conductor cross section, flexible	0.75 mm² ... 6 mm²
Conductor cross section, solid	0.75 mm² ... 10 mm²

12.4 Temperature cycles

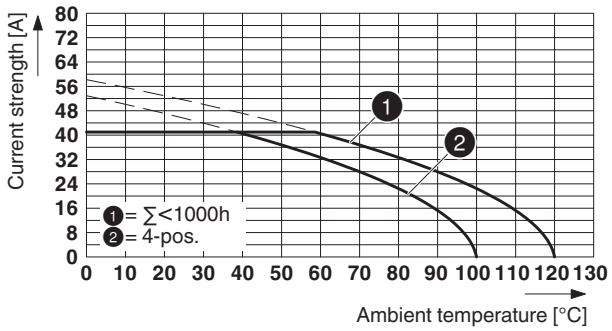
Specification	
Result	Test passed
Voltage drop	Voltage drop (U) after the load ≤ 22.5 mV or 1.5 x $U_{\text{after 24 h}}$ The small value is to be used.
Test current (minimum cross section)	9 A DC
Test current (maximum cross section)	41 A DC
Temperature cycles	192
Conductor cross section, flexible	0.75 mm² ... 6 mm²
Conductor cross section, solid	0.75 mm² ... 10 mm²

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13 Current carrying capacity/derating curves

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	0.8
Number of positions	See diagram
Conductor cross section	6 mm²

Type: LPC 6/...-ST-7,62 with PC 6/...-G-7,62



Insulation resistance	
Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 4 TΩ

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14 Environmental and durability tests

14.1 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	5 g (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.

15 Classification for connectors

Specification	IEC 61984:2008-10
Main features	Connectors without switching capacity (COC)
Construction form	Fixed connectors
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
Lock	no
Connection method	Screwless terminal points

15.1 Insulation resistance

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 4 TΩ

16 Approvals

cULus Recognized				
Use group	F	B	C	
mm^2/AWG/kcmil	18-8	18-8	18-8	
Voltage	600 V	600 V	600 V	
Current	35 A	35 A	35 A	

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17 Commercial Data

Order No.	1716925
Type	LPC 6/ 5-ST-7,62
Pieces per package	25
Net weight	22.22 g
GTIN	4055626514901
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

18 corresponding headers

Order No.	Type
1717019	PC 6/ 5-G-7,62

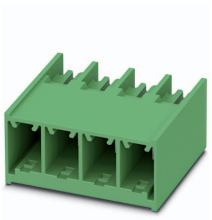
19 Accessories

Description	Order No.	Type
Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red	1701967	CP-PC RD
	3200603	AI 6 -18 YE
Crimping pliers, for uninsulated and insulated ferrules, DIN 46228 Part 1 and 4, from 0.14 mm^2 … 6 mm^2, also for TWIN ferrules up to 2 x 4 mm^2, automatic cross section adjustment, lateral insertion, equipped with fall protection	1213144	CRIMPFOX CENTRUS 6S
Stripping tool, for cables and conductors from 0.02 - 10 mm^2, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm^2 stranded/1.5 mm^2 solid, replaceable stripping blade	1212150	WIREFOX 10

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20 Combination tests





LPC 6/..-ST	**PC 6/..-G**			
IEC 61984	IEC 61984			
Mechanical tests (A)				
Insertion/withdrawal force per position	approx. 11 N / 10 N			
Polarization when inserted Requirement >20 N	Test passed			
Contact holder in insert Requirements >20 N	Test passed			
Durability tests (B)				
Contact resistance R_1	0.5 mΩ			
Insertion/withdrawal cycles	25			
Contact resistance R_2	0.5 mΩ			
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	7.3 kV			
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV			
Thermal tests (C)				
Tested number of positions	4			
Tested conductor cross section	6 mm^2			
Test current	41 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)	7.3 kV			
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV			
Environmental and endurance tests (E)				
Specification	IEC 61984:2008-10			
Degree of protection	Finger safety with IP20 test finger			

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