

Data sheet

Order No.: 1716923

Type: LPC 6/ 4-ST-7,62

PCB connector, Push-in spring connection



The figure shows the 4-position version

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 4 | • Nominal current | 41 A |
| • Conductor cross section | 6 mm ² | • Nominal voltage | 1000 V |
| • Color | green (6021) | • Connection direction | 0 ° |
| • Pitch | 7.62 mm | • Type of packaging | packed in cardboard |
| • Connection method | Push-in spring connection | | |

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



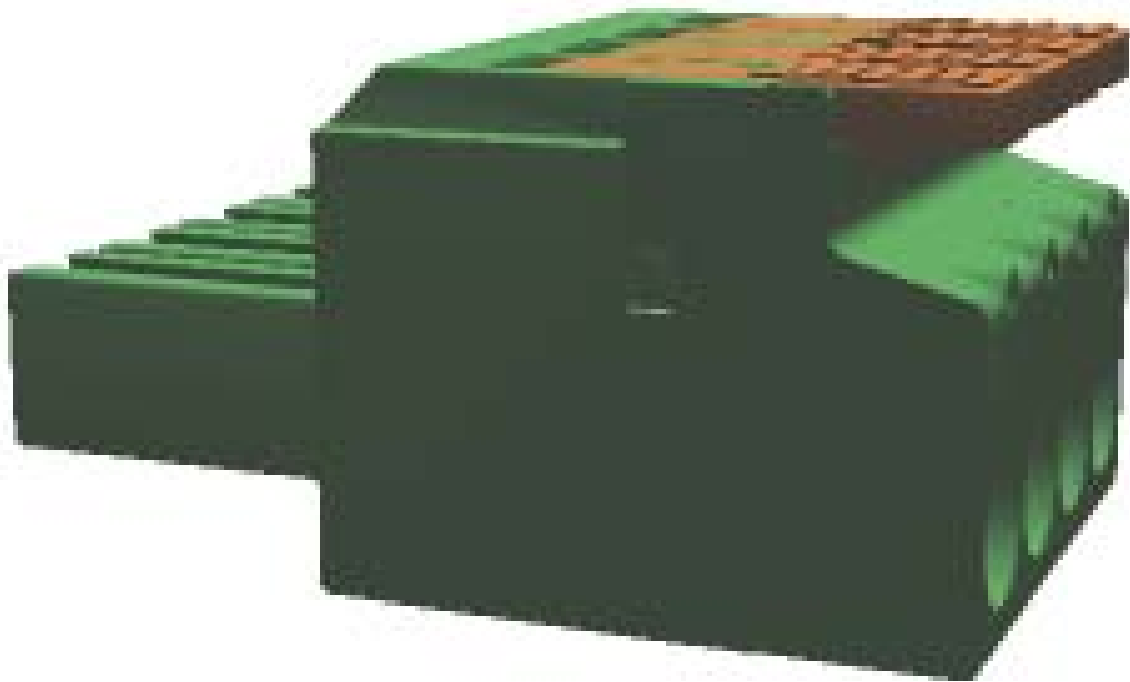
Make sure you always use the latest documentation.

It can be downloaded at: phoenixcontact.net/product/1716923

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



1716923 LPC 6/ 4-ST-7,62**5 item properties**

Order No.	1716923
Type	LPC 6/ 4-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	4
Number of levels	1
Number of connections	4
Number of potentials	4
Connection method	Push-in spring connection
Type of locking	without
	without
Connection direction of the connector to the PCB	
Solder pins per potential	1

5.1 Connection capacity

Conductor cross section, solid	0.75 mm ² ... 10 mm ²
Conductor cross section, flexible	0.75 mm ² ... 6 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.75 mm ² ... 6 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.75 mm ² ... 6 mm ²
Cylindrical gauge a x b / diameter	4.3 mm x 4.0 mm / 4.0 mm
Stripping length	18 mm

5.2 Connection capacity AWG

Conductor cross section AWG	18 ... 8
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5.3 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
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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Insulating material data	Housing	Actuation element
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	

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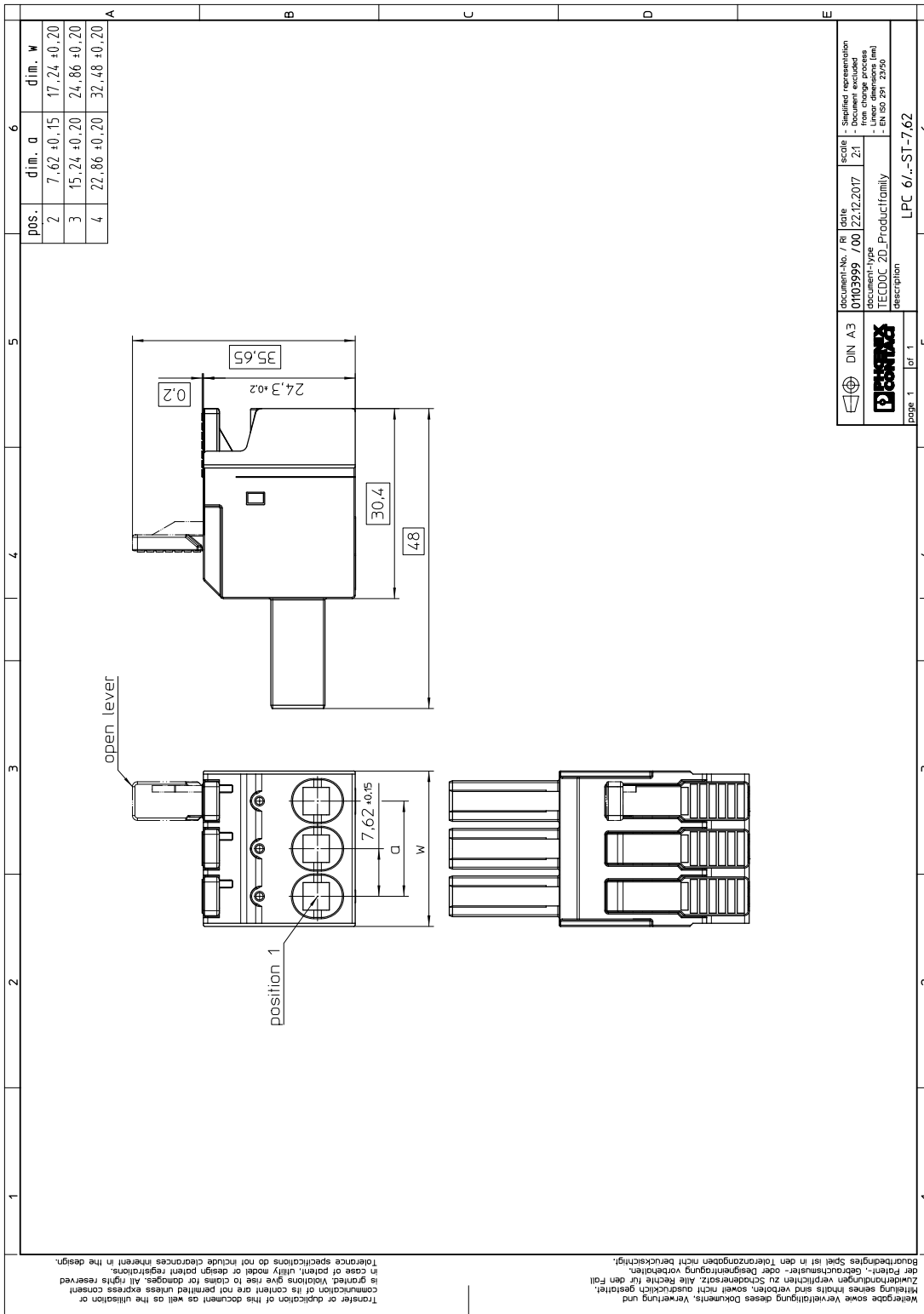
6 Dimensions

6.1 Dimensions for the product

Length	48 mm
Width	32.48 mm
Total height	35.65 mm
Dimension a	22.86 mm

1716923 LPC 6/ 4-ST-7,62

7 Series drawing



1716923 LPC 6/ 4-ST-7,62**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)

1716923 LPC 6/ 4-ST-7,62**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

1716923 LPC 6/ 4-ST-7,62**12 Electrical tests****12.1 Electrical data**

Rated current / conductor cross section	41 A / 6 mm ²
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 mm ² ... 6 mm ²
Conductor cross section, solid	0.75 mm ² ... 10 mm ²

12.4 Temperature cycles

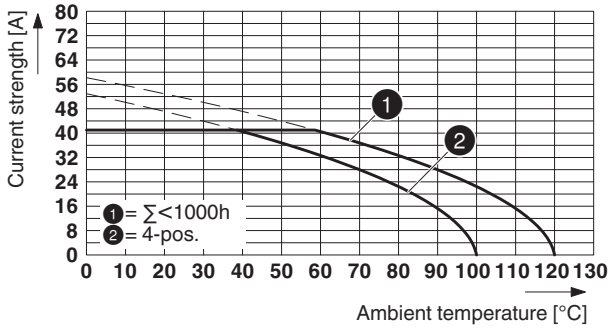
Specification	
Result	Test passed
Voltage drop	Voltage drop (U) after the load ≤ 22.5 mV or 1.5 x U _{after 24 h} The small value is to be used.
Test current (minimum cross section)	9 A DC
Test current (maximum cross section)	41 A DC
Temperature cycles	192
Conductor cross section, flexible	0.75 mm ² ... 6 mm ²
Conductor cross section, solid	0.75 mm ² ... 10 mm ²

1716923 LPC 6/ 4-ST-7,62

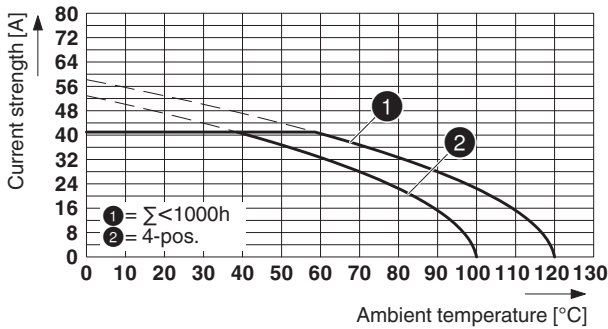
13 Current carrying capacity/derating curves

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 mm ²

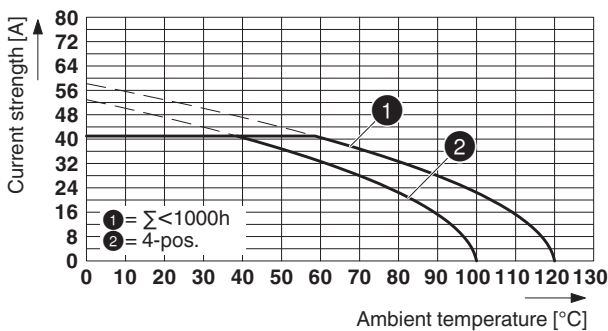
Typ: LPC 6/...-ST-7,62 mit PC 6/...-G-7,62



Typ: LPC 6/...-ST-7,62 mit PC 6/...-GU-7,62



Typ: LPC 6/...-ST-7,62 with PC 6/...-G1U-7,62



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

1716923 LPC 6/ 4-ST-7,62**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	32 A	32 A	32 A	

1716923 LPC 6/ 4-ST-7,62**17 Commercial Data**

Order No.	1716923
Type	LPC 6/ 4-ST-7,62
Pieces per package	25
Net weight	29.29 g
GTIN	4055626513294
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

18 corresponding headers

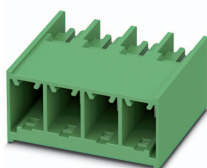
Order No.	Type
1054548	PC 6/ 4-G-7,62

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

1716923 LPC 6/ 4-ST-7,62

20 Combination tests

**LPC 6/..-ST**

IEC 61984

PC 6/..-G

IEC 61984

PC 6/..-GU

IEC 61984

PC 6/..-G1U

IEC 61984

Mechanical tests (A)

Insertion/withdrawal force per position	approx. 11 N / 10 N	approx. 11 N / 10 N	approx. 11 N / 10 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed

Durability tests (B)

Contact resistance R ₁	0.5 mΩ	0.5 mΩ	0.5 mΩ
Insertion/withdrawal cycles	25	25	25
Contact resistance R ₂	0.5 mΩ	0.5 mΩ	0.5 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	7.3 kV	7.3 kV	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV	3.31 kV

Thermal tests (C)

Tested number of positions	4	4	4
Tested conductor cross section	6 mm ²	6 mm ²	6 mm ²
Test current	41 A	41 A	41 A
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed

Climatic tests (D)

Test sequence 1: low temperature storage	-40 °C/2 h	-40 °C/2 h	-40 °C/2 h
Test sequence 2: heat storage	100 °C/168 h	100 °C/168 h	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	0.2 dm ³ SO ₂ on 300 dm ³ / 40 °C/1 cycle	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	7.3 kV	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV	3.31 kV

Environmental and endurance tests (E)

Specification	IEC 61984:2008-10	IEC 61984:2008-10	IEC 61984:2008-10
Degree of protection	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger