

# Data sheet

2018-12-14  
Product version 00  
Document revision 00

Order No.: 1716922

Type: LPC 6/ 3-ST-7,62

PCB connector, Push-in spring connection



The figure shows the 4-position version

## 1 Main features



- |                           |                           |                        |                     |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos.             | 3                         | • Nominal current      | 41 A                |
| • Conductor cross section | 6 mm <sup>2</sup>         | • 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/1716922](https://phoenixcontact.net/product/1716922)

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



**1716922 LPC 6/ 3-ST-7,62****5 item properties**

|                                                  |                           |
|--------------------------------------------------|---------------------------|
| Order No.                                        | 1716922                   |
| Type                                             | LPC 6/ 3-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                              | 3                         |
| Number of levels                                 | 1                         |
| Number of connections                            | 3                         |
| Number of potentials                             | 3                         |
| 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 <sup>2</sup> ... 10 mm <sup>2</sup> |
| Conductor cross section, flexible                                     | 0.75 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.75 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Conductor cross section flexible, with ferrule with plastic sleeve    | 0.75 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 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 |
|-----------------------------|----------|

**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)                                                            | orange (2003)     |

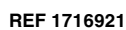
**1716922 LPC 6/ 3-ST-7,62**

| 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  |                   |

**1716922 LPC 6/ 3-ST-7,62****6 Dimensions****6.1 Dimensions for the product**

|              |          |
|--------------|----------|
|              |          |
| Length       | 48 mm    |
| Width        | 24.86 mm |
| Total height | 35.65 mm |
| Dimension a  | 15.24 mm |

## 7 Series drawing



**1716922 LPC 6/ 3-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) |

**1716922 LPC 6/ 3-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 <sup>2</sup> / solid / > 30 N    |
| Conductor cross section/conductor type/tractive force actual value | 0.75 mm <sup>2</sup> / flexible / > 30 N |
| Conductor cross section/conductor type/tractive force actual value | 10 mm <sup>2</sup> / solid / > 90 N      |
| Conductor cross section/conductor type/tractive force actual value | 6 mm <sup>2</sup> / 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            |

**1716922 LPC 6/ 3-ST-7,62**

|                             |                        |
|-----------------------------|------------------------|
|                             |                        |
| 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                   |

**1716922 LPC 6/ 3-ST-7,62****12 Electrical tests****12.1 Electrical data**

|                                         |                          |
|-----------------------------------------|--------------------------|
| Rated current / conductor cross section | 41 A / 6 mm <sup>2</sup> |
| 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 <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Conductor cross section, solid    | 0.75 mm <sup>2</sup> ... 10 mm <sup>2</sup> |

**12.4 Temperature cycles**

|                                      |                                                                                                              |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Specification                        |                                                                                                              |
| Result                               | Test passed                                                                                                  |
| Voltage drop                         | Voltage drop (U) after the load ≤ 22.5 mV or 1.5 x U <sub>after 24 h</sub><br>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 <sup>2</sup> ... 6 mm <sup>2</sup>                                                                   |
| Conductor cross section, solid       | 0.75 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                                                  |

## 1716922 LPC 6/ 3-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

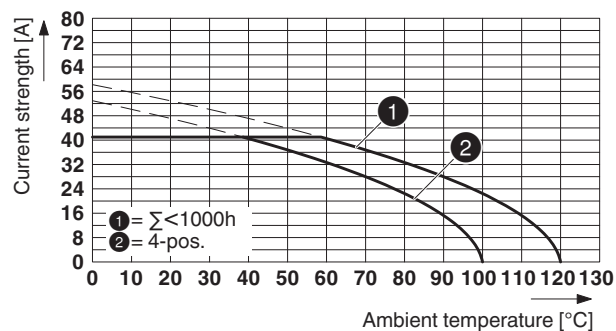
Number of positions

See diagram

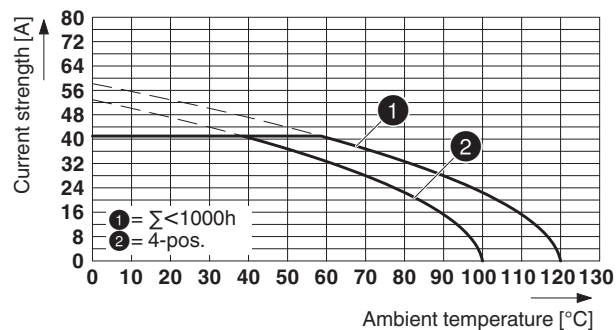
Conductor cross section

6 mm<sup>2</sup>

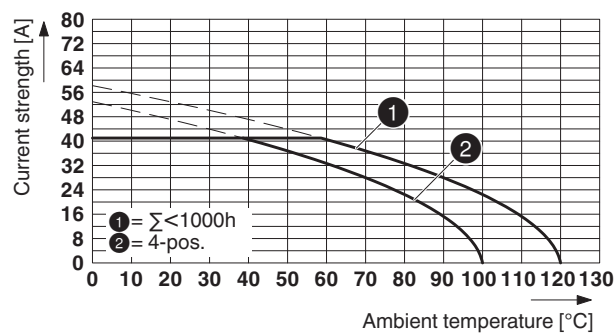
Typ: LPC 6/...-ST-7,62 mit PC 6/...-G-7,62



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

&gt; 4 TΩ

**1716922 LPC 6/ 3-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 <sup>2</sup> /AWG/kcmil                                                                           | 18-8  | 18-8  | 18-8  |  |
| Voltage                                                                                              | 600 V | 600 V | 600 V |  |
| Current                                                                                              | 32 A  | 32 A  | 32 A  |  |

**1716922 LPC 6/ 3-ST-7,62****17 Commercial Data**

|                    |                                                      |
|--------------------|------------------------------------------------------|
| Order No.          | 1716922                                              |
| Type               | LPC 6/ 3-ST-7,62                                     |
| Pieces per package | 25                                                   |
| Net weight         | 23 g                                                 |
| GTIN               | 4055626513287                                        |
|                    | 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           |
| 1054547   | PC 6/ 3-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 <sup>2</sup> ... 6 mm <sup>2</sup> , also for TWIN ferrules up to 2 x 4 mm <sup>2</sup> , 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 <sup>2</sup> , self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm <sup>2</sup> stranded/1.5 mm <sup>2</sup> solid, replaceable stripping blade                                     | 1212150   | WIREFOX 10          |

## 1716922 LPC 6/ 3-ST-7,62

## 20 Combination tests

**LPC 6/...-ST**

IEC 61984

**Mechanical tests (A)**

Insertion/withdrawal force per position

Polarization when inserted  
Requirement >20 NContact holder in insert  
Requirements >20 N**Durability tests (B)**Contact resistance  $R_1$ 

Insertion/withdrawal cycles

Contact resistance  $R_2$ Rated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ **Thermal tests (C)**

Tested number of positions

Tested conductor cross section

Test current

Upper limiting temperature  
Requirements < 100°C**Climatic tests (D)**

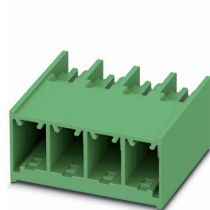
Test sequence 1: low temperature storage

Test sequence 2: heat storage

Test sequence 3: noxious gas storage  
(ISO 6988)Rated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ **Environmental and endurance tests (E)**

Specification

Degree of protection

**PC 6/...-G**

IEC 61984

approx. 11 N / 10 N

Test passed

Test passed

0.5 mΩ

25

0.5 mΩ

7.3 kV

3.31 kV

4

6 mm<sup>2</sup>

41 A

Test passed

-40 °C/2 h

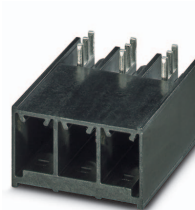
100 °C/168 h

0.2 dm<sup>3</sup> SO<sub>2</sub> on 300 dm<sup>3</sup>/  
40 °C/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

Finger safety with IP20  
test finger**PC 6/...-GU**

IEC 61984

approx. 11 N / 10 N

Test passed

Test passed

0.5 mΩ

25

0.5 mΩ

7.3 kV

3.31 kV

4

6 mm<sup>2</sup>

41 A

Test passed

-40 °C/2 h

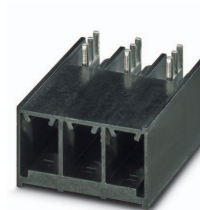
100 °C/168 h

0.2 dm<sup>3</sup> SO<sub>2</sub> on 300 dm<sup>3</sup>/  
40 °C/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

Finger safety with IP20  
test finger**PC 6/...-G1U**

IEC 61984

approx. 11 N / 10 N

Test passed

Test passed

0.5 mΩ

25

0.5 mΩ

7.3 kV

3.31 kV

4

6 mm<sup>2</sup>

41 A

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm<sup>3</sup> SO<sub>2</sub> on 300 dm<sup>3</sup>/  
40 °C/1 cycle

7.3 kV

3.31 kV

IEC 61984:2008-10

Finger safety with IP20  
test finger