

# PCB hybrid connector - LPCH 6/ 4+6-STL4-7,62 - 1716989

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PCB hybrid connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 10, pitch: 7.62 mm, connection method: Push-in spring connection, color: green, contact surface: Tin


Figure shows a 4+4-pos. version with locking flange at position 4

## 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



## Key Commercial Data

Packing unit	25 pc
Minimum order quantity	25 pc
GTIN	 4 055626 530444
GTIN	4055626530444

## Technical data

### Item properties

Brief article description	PCB hybrid connector
Plug-in system	POWER COMBICON 6 Hybrid
Type of contact	Female connector
Range of articles	LPCH 6/..-STL
Pitch	7.62 mm
	3.81 mm
Number of positions	10
Connection method	Push-in spring connection
Locking	Latch mechanism/latching at position 4
Number of levels	1

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## Technical data

### Item properties

	2
Number of connections	10
Number of potentials	10

### Electrical parameters

Nominal current	41 A
Nom. voltage	1000 V
Rated voltage	800 V
Rated voltage (III/2)	1000 V
Rated voltage (II/2)	1000 V
Rated surge voltage (III/3)	8 kV
Rated surge voltage (III/2)	8 kV
Rated surge voltage (II/2)	6 kV

### Power 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 AWG / kcmil	18 ... 8
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

### Connection capacity signal

Conductor cross section solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.5 mm
Stripping length	10 mm

### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

### Material data - housing

Housing color	green (6021)
Insulating material	PA GF
Insulating material group	I

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## Technical data

### Material data - housing

CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

### Material data – actuating element

Color of the actuating lever	orange (2003)
Insulating material	PA GF
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

### Dimensions for the product

Length [ l ]	48 mm
Width [ w ]	51.73 mm
Height [ h ]	27.5 mm
Pitch	7.62 mm
Height (without solder pin)	27.5 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	25
Denomination packing units	Pcs.

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

### Termination and connection method

Conductor connection test	The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force.
Test result	Test passed
Test – repeated connection and release	IEC 60999-1:1999-11
	Test passed
Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.75 mm <sup>2</sup> / solid / > 30 N
	0.75 mm <sup>2</sup> / flexible / > 30 N
	10 mm <sup>2</sup> / solid / > 90 N
	6 mm <sup>2</sup> / flexible / > 80 N

### Mechanical tests according to standard

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## Technical data

### Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	4 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	20 N

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	8 mm
Minimum clearance - inhomogeneous field (III/2)	8 mm
Minimum clearance - inhomogeneous field (II/2)	5.5 mm
Minimum creepage distance value (III/3)	10 mm
Minimum creepage distance value (III/2)	5 mm
Minimum creepage distance value (II/2)	5 mm

### Electrical tests - Function

Specification	IEC 60999-1:1999-11
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### Temperature cycles

Specification	IEC 60999-1:1999-11
Test current (minimum cross section)	9 A DC
Test current (maximum cross section)	41 A DC
Temperature cycles	192

### Current carrying capacity / derating curves

Caption	Type: LPCH 6/...+...-STL...-7,62 with PCH 6/...+...-GL...-7,62
Specification	IEC 61984:2008-10
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	4 N
Polarization when inserted requirement >20 N	Test passed

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## Technical data

### Mechanical tests (A)

Contact holder in insert requirements >20 N	Test passed
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### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	0.42 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	0.46 mΩ
Impulse withstand voltage at sea level	7.3 kV
Power-frequency withstand voltage	3.31 kV

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	4
Conductor cross section	6 mm <sup>2</sup>
Test current	41 A
Upper limiting temperature requirements <100 °C	Test passed

### Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Impulse withstand voltage at sea level	7.3 kV
Power-frequency withstand voltage	3.31 kV

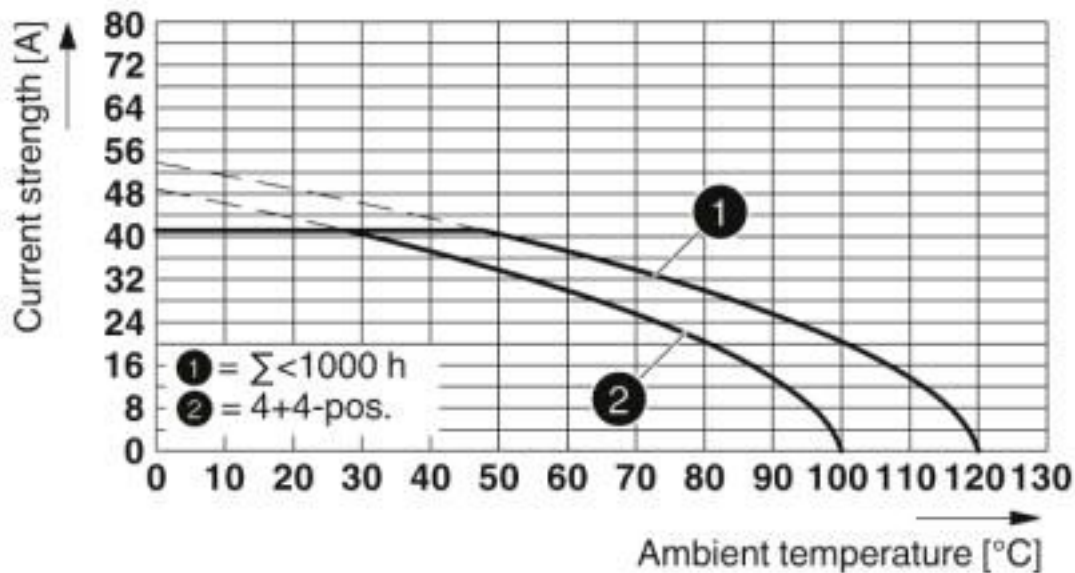
### Environmental and durability tests (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Back of hand safety with IP10 access probe

## Drawings

# PCB hybrid connector - LPCH 6/ 4+6-STL4-7,62 - 1716989

Diagram



Type: LPCH 6/...+...-STL...-7,62 with PCH 6/...+...-GL...-7,62

## Classifications

eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440309
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

ETIM

ETIM 5.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

## Approvals

Approvals

Approvals


cULus Recognized / EAC

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## Approvals

Ex Approvals

### Approval details

cULus Recognized  <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> E60425-20010727		
	B	C
Nominal voltage UN	600 V	600 V
Nominal current IN	35 A	35 A
mm <sup>2</sup> /AWG/kcmil	18-8	18-8

EAC  B.01687
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## Accessories

Accessories

Cable end sleeve

Ferrule - AI 6 -18 YE - 3200603



Ferrule, sleeve length: 18 mm, length: 26 mm, color: yellow

Coding element

Coding profile - CP-PC RD - 1701967



Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red

Crimping tool

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### Accessories

Crimping pliers - CRIMPFOX CENTRUS 6S - 1213144



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

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### Stripping tool

Stripping tool - WIREFOX 10 - 1212150



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

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### Additional products

PCB hybrid header - PCH 6/ 4+6-GL4-7,62 - 1717138



PCB hybrid header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 10, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>



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