

# PCB hybrid header - PCH 6/ 4+4-G-7,62 - 1717105

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PCB hybrid header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 8, pitch: 7.62 mm, color: black, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm


Figure shows a 3+4-pos. version

## Your advantages

- Combining signals and power in a single header saves time and space
- Easy PCB replacement thanks to plug-in modules
- Well-known mounting principle allows worldwide use



## Key Commercial Data

|                        |   |
|------------------------|---|
| Packing unit           | 50 pc   |
| Minimum order quantity | 50 pc   |
| GTIN                   | <br>4 055626 530536 |
| GTIN                   | 4055626530536   |

## Technical data

### Item properties

|                           |                                 |
|---------------------------|---------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system            | POWER COMBICON 6 Hybrid         |
| Type of contact           | Male connector                  |
| Range of articles         | PCH 6/..-G                      |
| Pitch                     | 7.62 mm                         |
|                           | 3.81 mm                         |
| Number of positions       | 8                               |
| Mounting type             | Wave soldering                  |
| Pin layout                | Linear pinning                  |
| Number of levels          | 1                               |
|                           | 2                               |
| Number of connections     | 8                               |

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## Technical data

### Item properties

|                      |   |
|----------------------|---|
| Number of potentials | 8 |
|----------------------|---|

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 41 A   |
| Nom. voltage                | 630 V  |
| Rated current               | 8 A    |
| Rated voltage               | 630 V  |
| Rated voltage (III/2)       | 630 V  |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (III/3) | 6 kV   |
| Rated surge voltage (III/2) | 6 kV   |
| Rated surge voltage (II/2)  | 6 kV   |

### 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 contact area (top layer)      | Tin (2 - 4 µm Sn)   |
| Metal surface contact area (middle layer)   | Nickel (1.3 - 3 µm Ni),   |
| Metal surface soldering area (top layer)    | Tin (2 - 4 µm Sn)   |
| Metal surface soldering area (middle layer) | Nickel (1.3 - 3 µm Ni)  |

### Material data - housing

|  |              |
|--|--------------|
| Housing color                          | black (9005) |
| Insulating material                    | PA GF        |
| Insulating material group              | I            |
| CTI according to IEC 60112             | 600          |
| Flammability rating according to UL 94 | V0           |

### Dimensions for the product

|                             |            |
|-----------------------------|------------|
| Length [ l ]                | 28.2 mm    |
| Width [ w ]                 | 39.63 mm   |
| Height [ h ]                | 19 mm      |
| Pitch                       | 7.62 mm    |
| Height (without solder pin) | 16.4 mm    |
| Solder pin [P]              | 2.6 mm     |
| Pin dimensions              | 1 x 1.2 mm |

### Dimensions for PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.7 mm |
|---------------|--------|

### Packaging information

|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

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## Technical data

### Packaging information

|                            |      |
|----------------------------|------|
| Pieces per package         | 50   |
| 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) |

### 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) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (III/2) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (II/2)  | 5.5 mm              |
| Minimum creepage distance value (III/3)         | 8 mm                |
| Minimum creepage distance value (III/2)         | 3.2 mm              |
| Minimum creepage distance value (II/2)          | 5 mm                |

### 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 |
| Contact holder in insert requirements >20 N  | Test passed |

### 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     |

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## Technical data

### Climatic tests (D)

|  |   |
|--|---|
| 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)

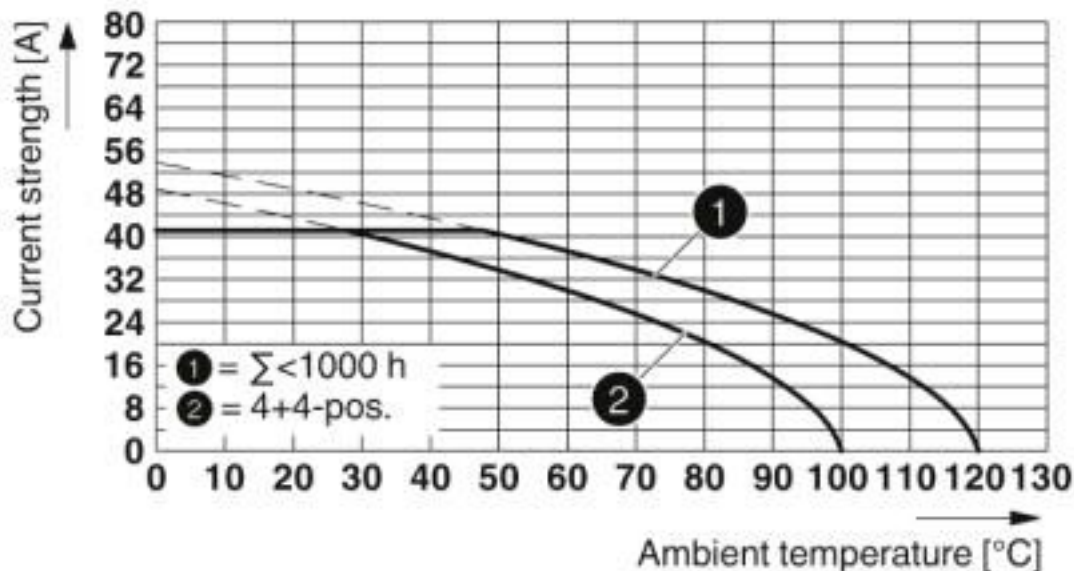
|                                       |  |
|---------------------------------------|--|
| Specification                         | IEC 61984:2008-10                          |
| Result, degree of protection, IP code | Back of hand safety with IP10 access probe |

### 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                  |

## Drawings

Diagram



Type: LPCH 6/...+...-ST-7,62 with PCH 6/...+...-G-7,62

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
|---------------|----------|

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| 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 | 27440402 |
| eCl@ss 8.0 | 27440402 |
| eCl@ss 9.0 | 27440402 |

### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC002637 |
| ETIM 6.0 | EC002637 |
| ETIM 7.0 | EC002637 |

## Approvals


### Approvals

#### Approvals

cULus Recognized / EAC / VDE Zeichengenehmigung

#### 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 | 300 V   | 300 V   |                 |
| Nominal current IN | 35 A  | 35 A  |                 |

|     |   |         |
|-----|---|---------|
| EAC |  | B.01687 |
|-----|---|---------|

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## Approvals

|                        |  |   |          |
|------------------------|--|---|----------|
| VDE Zeichengenehmigung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40050635 |
| Nominal voltage UN     |  | 630 V   |          |
| Nominal current IN     |  | 41 A  |          |

## Accessories

### Accessories

#### 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



## Additional products

PCB hybrid connector - LPCH 6/ 4+4-ST-7,62 - 1716955



PCB hybrid connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 8, pitch: 7.62 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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