

# PC 4/ 4-GFL-7,62 GY CP1,3 - PCB header

1972593

<https://www.phoenixcontact.com/us/products/1972593>

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PCB headers, nominal cross section: 4 mm<sup>2</sup>, color: gray, nominal current: 20 A, rated voltage (III/2): 630 V, contact surface: Sn, contact connection type: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PC 4/-GFL, pitch: 7.62 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm, number of solder pins per potential: 2, plug-in system: COMBICON PC 4, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: packed in cardboard

## Your advantages

- Well-known mounting principle allows worldwide use
- Screwable flange for superior mechanical stability
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Easy PCB replacement thanks to plug-in modules
- Plug-in direction parallel to the PCB

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1972593                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Product key                          | AADSAE                         |
| GTIN                                 | 4017918938857                  |
| Weight per piece (including packing) | 10.118 g                       |
| Weight per piece (excluding packing) | 9 g                            |
| Country of origin                    | DE                             |

## Technical data

### Product properties

|                           |                       |
|---------------------------|-----------------------|
| Product type              | PCB headers           |
| Product family            | PC 4/..-GFL           |
| Product line              | COMBICON Connectors L |
| Number of positions       | 4                     |
| Pitch                     | 7.62 mm               |
| Number of connections     | 4                     |
| Number of rows            | 1                     |
| Number of potentials      | 4                     |
| Pin layout                | Linear pinning        |
| Solder pins per potential | 2                     |

### Electrical properties

#### Properties

|                             |       |
|-----------------------------|-------|
| Nominal current $I_N$       | 20 A  |
| Nominal voltage $U_N$       | 630 V |
| Rated voltage (III/3)       | 400 V |
| Rated surge voltage (III/3) | 6 kV  |
| Rated voltage (III/2)       | 630 V |
| Rated surge voltage (III/2) | 6 kV  |
| Rated voltage (II/2)        | 630 V |
| Rated surge voltage (II/2)  | 6 kV  |

### Mounting

|               |                |
|---------------|----------------|
| Mounting type | Wave soldering |
| Pin layout    | Linear pinning |

#### Flange

|                   |                   |
|-------------------|-------------------|
| Tightening torque | 0.3 Nm ... 0.7 Nm |
|-------------------|-------------------|

### Material specifications

#### 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 (5 $\mu$ m - 7 $\mu$ m Sn)   |
| Metal surface contact area (middle layer)   | Nickel (2 $\mu$ m - 5 $\mu$ m Ni)  |
| Metal surface soldering area (top layer)    | Tin (5 $\mu$ m - 7 $\mu$ m Sn)   |
| Metal surface soldering area (middle layer) | Nickel (2 $\mu$ m - 5 $\mu$ m Ni)  |

#### Material data - housing

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|   |             |
|---|-------------|
| Color (Housing)   | gray (7042) |
| Insulating material   | PA          |
| Insulating material group   | I           |
| CTI according to IEC 60112  | 600         |
| Flammability rating according to UL 94                            | V0          |
| 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      |

## Notes

|                    |  |
|--------------------|--|
| Notes on operation | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|--------------------|--|

## Dimensions

|                       |            |
|-----------------------|------------|
| Dimensional drawing   |            |
| Pitch                 | 7.62 mm    |
| Width [w]             | 30.46 mm   |
| Height [h]            | 19.25 mm   |
| Length [l]            | 29 mm      |
| Installed height      | 14.25 mm   |
| Solder pin length [P] | 5 mm       |
| Pin dimensions        | 1 x 0.8 mm |

## PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.3 mm |
|---------------|--------|

## Electrical tests

### Air clearances and creepage distances |

|  |                     |
|--|---------------------|
| Specification  | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| Rated insulation voltage (III/3)                       | 400 V               |
| Rated surge voltage (III/3)                            | 6 kV                |
| minimum clearance value - non-homogenous field (III/3) | 5.5 mm              |
| minimum creepage distance (III/3)                      | 5.5 mm              |
| Rated insulation voltage (III/2)                       | 630 V               |
| Rated surge voltage (III/2)                            | 6 kV                |
| minimum clearance value - non-homogenous field (III/2) | 5.5 mm              |

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|   |        |
|---|--------|
| minimum creepage distance (III/2)                     | 5.5 mm |
| Rated insulation voltage (II/2)                       | 630 V  |
| Rated surge voltage (II/2)                            | 6 kV   |
| minimum clearance value - non-homogenous field (II/2) | 5.5 mm |
| minimum creepage distance (II/2)                      | 5.5 mm |

## Environmental and real-life conditions

### Ambient conditions

|   |   |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                       |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |

## Packaging specifications

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002637 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.071 kg CO2e |
|---------|---------------|

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