

# Feed-through header - PC 6-16/ 4-G1-10,16 - 1998959

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PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 4, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm

The figure shows a 5-pos. version of the product

## Your advantages

- Well-known mounting principle allows worldwide use
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



## Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 50 pc         |
| GTIN         |               |
| GTIN         | 4046356038454 |

## Technical data

### Item properties

|                           |                     |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system            | POWER COMBICON 16   |
| Type of contact           | Male connector      |
| Range of articles         | PC 6-16/..-G1       |
| Pitch                     | 10.16 mm            |
| Number of positions       | 4                   |
| Mounting type             | Wave soldering      |
| Pin layout                | Linear pinning      |
| Locking                   | without             |
| Number of levels          | 1                   |
| Number of connections     | 4                   |
| Number of potentials      | 4                   |

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## Technical data

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 76 A   |
| Nom. voltage                | 1000 V |
| Rated voltage               | 1000 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   |

### 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                     | Electroplated silver  |
| Metal surface contact area (top layer)      | Silver (4 - 8 µm Ag)  |
| Metal surface contact area (middle layer)   | Nickel (2 - 4 µm Ni),   |
| Metal surface soldering area (top layer)    | Silver (4 - 8 µm Ag)  |
| Metal surface soldering area (middle layer) | Nickel (2 - 4 µm Ni)  |

### Material data - housing

|   |              |
|---|--------------|
| Housing color   | green (6021) |
| 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       |

### Dimensions for the product

|                             |            |
|-----------------------------|------------|
| Length [ l ]                | 34 mm      |
| Width [ w ]                 | 43.68 mm   |
| Height [ h ]                | 17.4 mm    |
| Pitch                       | 10.16 mm   |
| Height (without solder pin) | 13.4 mm    |
| Solder pin [P]              | 4 mm       |
| Pin spacing                 | 10.16 mm   |
| Pin dimensions              | 1 x 1.2 mm |

### Dimensions for PCB design

|               |          |
|---------------|----------|
| Hole diameter | 1.7 mm   |
| Pin spacing   | 10.16 mm |

### Packaging information

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## Technical data

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

### General product information

|      |  |
|------|--|
| Note | 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. |
|------|--|

### 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) | 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)         | 12.5 mm             |
| Minimum creepage distance value (III/2)         | 5 mm                |
| Minimum creepage distance value (II/2)          | 5 mm                |

### Current carrying capacity / derating curves

|                  |  |
|------------------|--|
| Caption          | Type: PC 16/...-ST-10,16 with PC 6-16/...-G1-10,16 |
| 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.          | 17 N        |
| Withdraw strength per pos. approx.           | 17 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>      | 0.22 mΩ               |
| Insertion/withdrawal cycles            | 50                    |
| Contact resistance R <sub>2</sub>      | 0.24 mΩ               |
| Impulse withstand voltage at sea level | 9.8 kV                |
| Power-frequency withstand voltage      | 4.26 kV               |

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### Technical data

#### Durability tests (B)

|  |         |
|--|---------|
| Insulation resistance, neighboring positions | > 17 TΩ |
|--|---------|

#### Thermal tests (C)

|   |                       |
|---|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 9                     |
| Conductor cross section                         | 16 mm <sup>2</sup>    |
| Test current                                    | 57 A DC               |
| 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 | 9.8 kV  |
| Power-frequency withstand voltage      | 4.26 kV   |

#### Environmental and durability tests (E)

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Specification                         | IEC 61984:2008-10                   |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

#### Standards and Regulations

|  |        |
|--|--------|
| Connection in acc. with standard       | EN-VDE |
|  | CUL    |
| Flammability rating according to UL 94 | V0     |

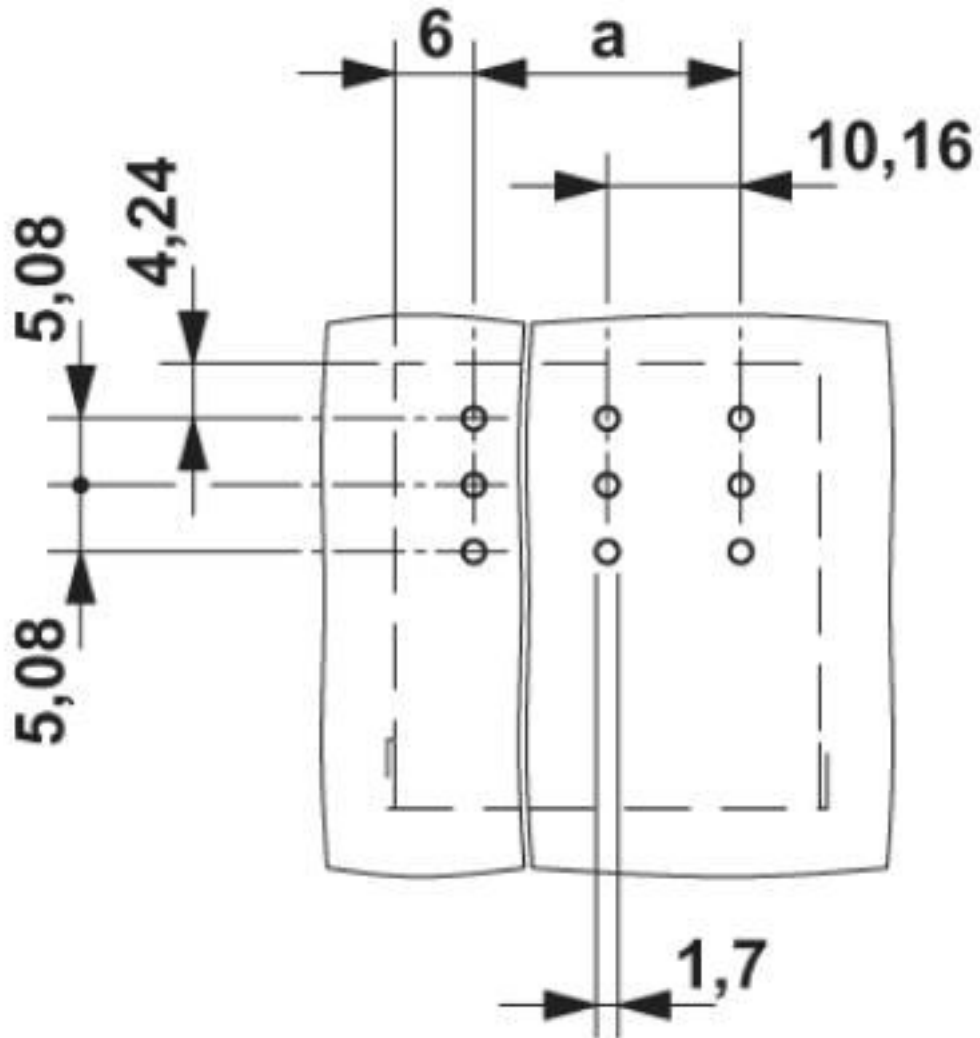
#### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Drawings

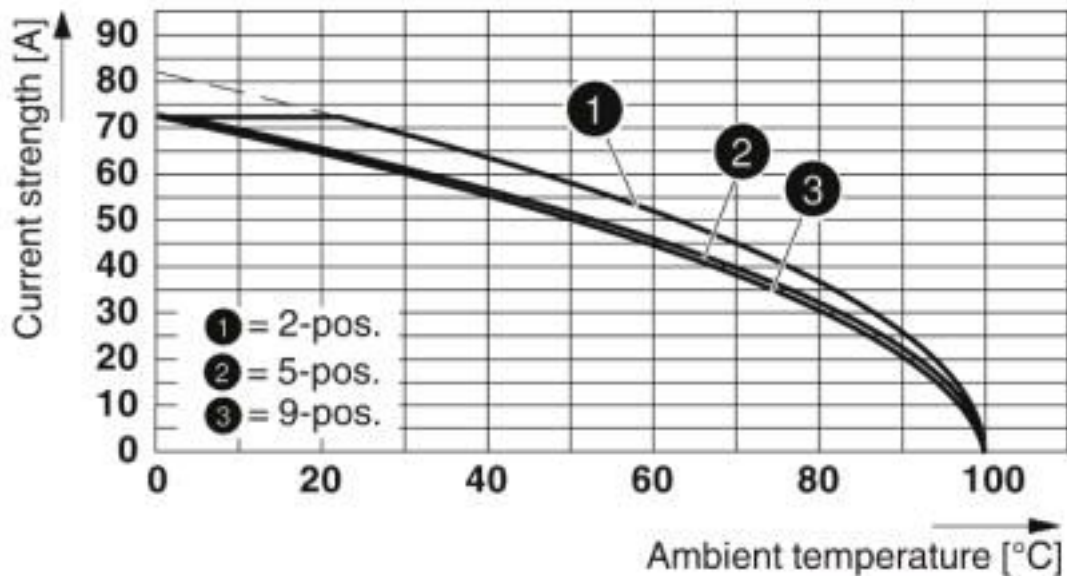
# Feed-through header - PC 6-16/ 4-G1-10,16 - 1998959

Drilling diagram



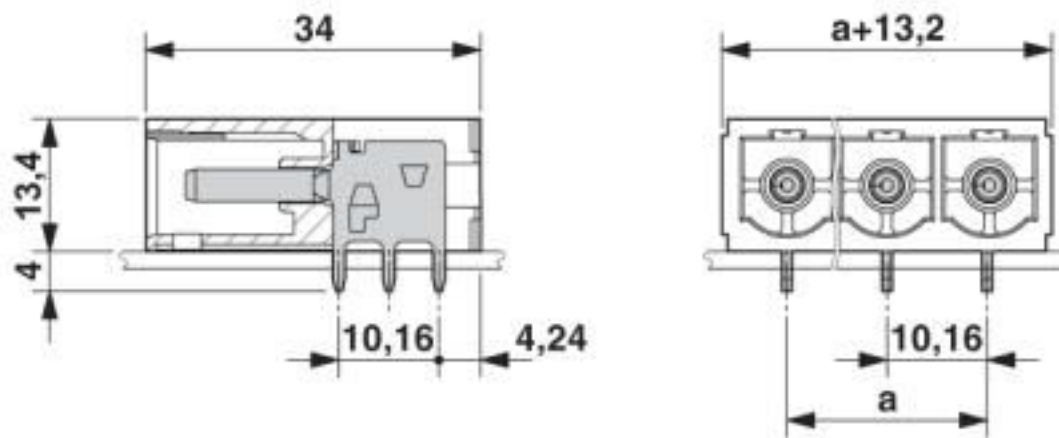
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Diagram



Type: PC 16/..-ST-10,16 with PC 6-16/..-G1-10,16

Dimensional drawing



## Classifications

eCl@ss

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

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### Classifications

#### eCl@ss

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

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002637 |
| ETIM 5.0 | EC002637 |
| ETIM 6.0 | EC002637 |
| ETIM 7.0 | EC002637 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11     | 39121409 |
| UNSPSC 12.01  | 39121409 |
| UNSPSC 13.2   | 39121409 |
| UNSPSC 18.0   | 39121409 |
| UNSPSC 19.0   | 39121409 |
| UNSPSC 20.0   | 39121409 |
| UNSPSC 21.0   | 39121409 |

### Approvals


#### Approvals

#### Approvals

IECEE CB Scheme / SEV / EAC / cULus Recognized

#### Ex Approvals

#### Approval details

|                    |   |   |             |
|--------------------|---|---|-------------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | CH-10653-M1 |
| Nominal voltage UN | 1000 V  |   |             |
| Nominal current IN | 76 A  |   |             |

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## Approvals

|                    |  |   |            |
|--------------------|--|---|------------|
| SEV                |  | <a href="https://www.eurofins.ch/de/">https://www.eurofins.ch/de/</a> | IK-4468-M1 |
| Nominal voltage UN |  | 1000 V  |            |
| Nominal current IN |  | 76 A  |            |

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

|                    |       |   |                 |
|--------------------|-------|---|-----------------|
| 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> | E60425-20040202 |
|                    | B     | C   | D               |
| Nominal voltage UN | 300 V | 300 V   | 600 V           |
| Nominal current IN | 66 A  | 66 A  | 5 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

Feed-through plug - DFK-IPC 16/ 4-ST-10,16 - 1703713



Feed-through connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 4, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver



## Feed-through header - PC 6-16/ 4-G1-10,16 - 1998959

### Accessories

Printed-circuit board connector - SPC 16/ 4-ST-10,16 - 1711284



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 4, pitch: 10.16 mm, connection method: Push-in spring connection, color: green, contact surface: Silver

Printed-circuit board connector - TPC 16/ 4-ST-10,16 - 1715196



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 4, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

Printed-circuit board connector - PC 6/ 4-ST-10,16 - 1913523



PCB connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 4, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

Printed-circuit board connector - PC 16/ 4-ST-10,16 - 1967391



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 4, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

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