

# PCB connector - ZEC 1,5/ 9-LPV-7,5 C2



1898444

<https://www.phoenixcontact.com/us/products/1898444>

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PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Female connector, number of potentials: 9, number of rows: 1, number of positions: 9, number of connections: 9, product range: ZEC 1,5/...-LPV, pitch: 7.5 mm, mounting: Direct plug-in method, conductor/PCB connection direction: 0 °, number of solder pins per potential: 2, plug-in system: ZEC, locking: without, mounting: without, type of packaging: packed in cardboard

## Your advantages

- Easy component connection
- Inexpensive direct plug-in connection with just one component

## Commercial Data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1898444                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to Order (non-returnable) |
| Sales Key                            | A01                            |
| Product Key                          | AACEBA                         |
| GTIN                                 | 4017918167158                  |
| Weight per Piece (including packing) | 9.424 g                        |
| Weight per Piece (excluding packing) | 9.424 g                        |
| Customs tariff number                | 85366930                       |
| Country of origin                    | GR                             |

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## Technical Data

### Product properties

|                           |                       |
|---------------------------|-----------------------|
| Type                      | PCB connector         |
| Product line              | COMBICON Connectors M |
| Product type              | PCB connector         |
| Number of positions       | 9                     |
| Pitch                     | 7.5 mm                |
| Number of connections     | 9                     |
| Number of rows            | 1                     |
| Mounting flange           | without               |
| Number of potentials      | 9                     |
| Solder pins per potential | 2                     |

### Electrical properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 10 A   |
| Nominal voltage $U_N$       | 630 V  |
| Degree of pollution         | 3      |
| Contact resistance          | 1.2 mΩ |
| 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   |

### Mounting

|               |                       |
|---------------|-----------------------|
| Mounting type | Direct plug-in method |
|---------------|-----------------------|

### 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                                                                         |
| Metal surface contact area (top layer) | Tin (5 - 7 μm Sn)                                                                |

#### 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          |

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Temperature for the ball pressure test according to EN 60695-10-2

125 °C

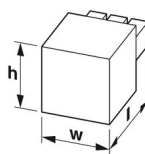
## Notes

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            | 7.5 mm  |
| Width [w]        | 68.9 mm |
| Height [h]       | 7 mm    |
| Length [l]       | 22.9 mm |
| Installed height | 7 mm    |

## Mechanical tests

### Insertion and withdrawal forces

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 20          |
| Insertion strength per pos. approx. | 6 N         |
| Withdraw strength per pos. approx.  | 3 N         |

### Resistance of inscriptions

|               |                        |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result        | Test passed            |

### Visual inspection

|               |                     |
|---------------|---------------------|
| Specification | IEC 60512-2:1985-00 |
| Result        | Test passed         |

### Dimension check

|               |                     |
|---------------|---------------------|
| Specification | IEC 60512-2:1985-00 |
| Result        | Test passed         |

## 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               |

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|                                                        |        |
|--------------------------------------------------------|--------|
| 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 |
| minimum creepage distance (III/2)                      | 5.5 mm |
| Rated insulation voltage (II/2)                        | 1000 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

### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:1995-03  |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Sweep speed            | 5g (60.1 - 150 Hz)     |
| Test duration per axis | 2.5 h                  |

### Durability test

|                             |                     |
|-----------------------------|---------------------|
| Specification               | IEC 60512-5:1992-08 |
| Contact resistance $R_1$    | 1.2 mΩ              |
| Contact resistance $R_2$    | 1.5 mΩ              |
| Insertion/withdrawal cycles | 20                  |

### Climatic test

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

### Ambient conditions

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

## Packaging specifications

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

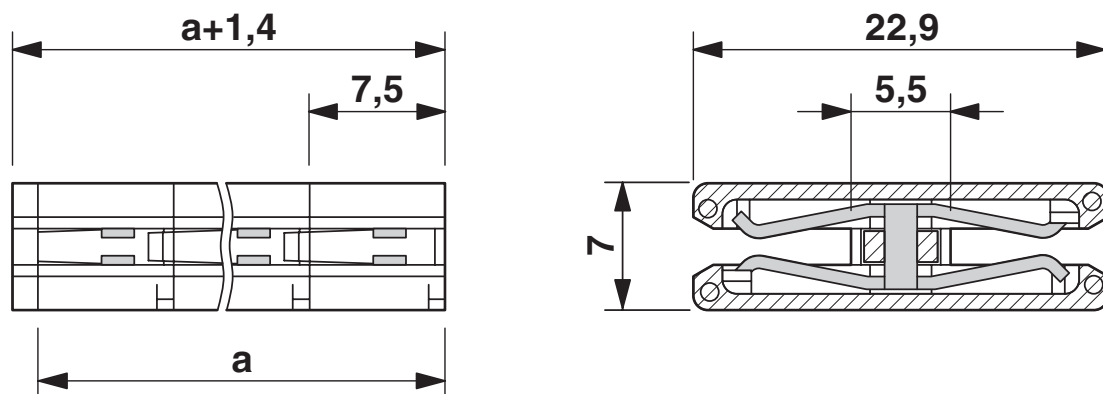
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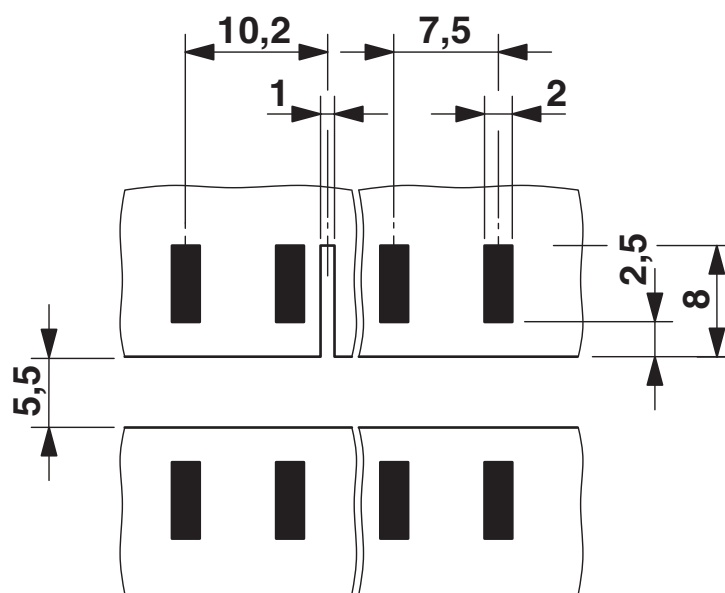
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## Drawings

Dimensional drawing



Drilling plan/solder pad geometry



Size of the PCB:  $1.6 \pm 0.2$  mm

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## Approvals

|  |  <b>IECEE CB Scheme</b><br>Approval ID: DE1-51128 |                       |                   |                             |
|--|------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal Voltage $U_N$                                                                                                              | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|  | 1000 V                                                                                                                             | 10 A                  | -                 | -                           |

|  <b>EAC</b><br>Approval ID: B.01687 |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|----------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|             |  <b>cULus Recognized</b><br>Approval ID: E60425-19941110 |                       |                   |                             |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|-----------------------------|
|             | Nominal Voltage $U_N$                                                                                                                     | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
| Use group B |                                                                                                                                           |                       |                   |                             |
|             | 300 V                                                                                                                                     | 10 A                  | -                 | -                           |
| Use group D |                                                                                                                                           |                       |                   |                             |
|             | 300 V                                                                                                                                     | 10 A                  | -                 | -                           |

|  |  <b>VDE Gutachten mit Fertigungsüberwachung</b><br>Approval ID: 40020343 |                       |                   |                             |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal Voltage $U_N$                                                                                                                                       | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|  | 400 V                                                                                                                                                       | 10 A                  | -                 | -                           |

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## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27440402 |
| ECLASS-10.0.1 | 27440402 |
| ECLASS-11.0   | 27460201 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

### UNSPSC

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

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## Environmental Product Compliance

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

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