

# MSTBO 2,5/ 4-GL-5,08 BK - PCB header



1950670

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PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 320 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: MSTBO 2,5/...-GL, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Orthogonal, locking: without, mounting method: without, type of packaging: packed in cardboard

## Your advantages

- Well-known mounting principle allows worldwide use
- Can be combined with the MSTB 2,5 range
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1950670       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | AA03          |
| Product key                          | AACSKA        |
| GTIN                                 | 4017918887780 |
| Weight per piece (including packing) | 2.97 g        |
| Weight per piece (excluding packing) | 2.95 g        |
| Customs tariff number                | 85366930      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                           |                                 |
|---------------------------|---------------------------------|
| Product type              | PCB headers                     |
| Product family            | MSTBO 2,5/...-GL                |
| Product line              | COMBICON Connectors M           |
| Type                      | Header perpendicular to the PCB |
| Number of positions       | 4                               |
| Pitch                     | 5.08 mm                         |
| Number of connections     | 4                               |
| Number of rows            | 1                               |
| Number of potentials      | 4                               |
| Mounting type             | without                         |
| Pin layout                | Linear pinning                  |
| Solder pins per potential | 1                               |

### Electrical properties

#### Properties

|                             |       |
|-----------------------------|-------|
| Nominal current $I_N$       | 8 A   |
| Nominal voltage $U_N$       | 320 V |
| Rated voltage (III/3)       | 250 V |
| Rated surge voltage (III/3) | 4 kV  |
| Rated voltage (III/2)       | 320 V |
| Rated surge voltage (III/2) | 4 kV  |
| Rated voltage (II/2)        | 630 V |
| Rated surge voltage (II/2)  | 4 kV  |

### Mounting

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

### 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                  | hot-dip tin-plated                                                               |
| Metal surface contact area (top layer)   | Tin (5 - 7 $\mu\text{m}$ Sn)                                                     |
| Metal surface soldering area (top layer) | Tin (5 - 7 $\mu\text{m}$ Sn)                                                     |

#### Material data - housing

|                     |              |
|---------------------|--------------|
| Color (Housing)     | black (9005) |
| Insulating material | PA           |

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1950670

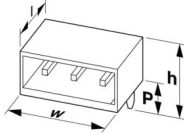
<https://www.phoenixcontact.com/us/products/1950670>

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| 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                 | 5.08 mm                                                                             |
| Width [w]             | 8.6 mm                                                                              |
| Height [h]            | 20.32 mm                                                                            |
| Length [l]            | 38.98 mm                                                                            |
| Installed height      | 20.32 mm                                                                            |
| Solder pin length [P] | 3.2 mm                                                                              |
| Pin dimensions        | 0.32 x 1.2 mm                                                                       |

## PCB design

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

## Electrical tests

### Air clearances and creepage distances |

|                                  |       |
|----------------------------------|-------|
| Insulating material group        | I     |
| Rated insulation voltage (III/3) | 250 V |
| Rated surge voltage (III/3)      | 4 kV  |
| Rated insulation voltage (III/2) | 320 V |
| Rated surge voltage (III/2)      | 4 kV  |
| Rated insulation voltage (II/2)  | 630 V |
| Rated surge voltage (II/2)       | 4 kV  |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                     |
|---------------------------------|-----------------------------------------------------|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
|---------------------------------|-----------------------------------------------------|

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|                                         |                  |
|-----------------------------------------|------------------|
| 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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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1950670>

|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                    | 300 V                 | 6.5 A                 | -                 | -                           |
| D                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                    | 300 V                 | 6.5 A                 | -                 | -                           |

|  <b>cULus Recognized</b><br>Approval ID: E60425-20050718 |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                         |                       |                       |                   |                             |
|                                                                                                                                           | 250 V                 | 8 A                   | -                 | -                           |
| D                                                                                                                                         |                       |                       |                   |                             |
|                                                                                                                                           | 300 V                 | 8 A                   | -                 | -                           |

|  <b>VDE approval of drawings</b><br>Approval ID: 40050648 |                       |                       |                   |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                              | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                                        |                       |                       |                   |                             |
|                                                                                                                                              | 250 V                 | 8 A                   | -                 | -                           |

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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% |
|-------------------------------------|----------------------------|

### EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.227 kg CO2e |
|---------|---------------|

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)