

# MSTB 2,5/ 6-GF-5,08 EX - PCB header



1795705

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PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, contact surface: Sn, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTB 2,5/..-GF-EX, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.23 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5 EX, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard

## Your advantages

- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Easy PCB replacement thanks to plug-in modules
- Well-known mounting principle allows worldwide use
- Satisfies the more stringent safety requirements of “Ex eb” protection according to IEC 60079-7 for potentially explosive areas

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1795705                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA03                           |
| Product key                          | AACSHN                         |
| Catalog page                         | Page 374 (C-1-2013)            |
| GTIN                                 | 4046356635905                  |
| Weight per piece (including packing) | 3.544 g                        |
| Weight per piece (excluding packing) | 3.12 g                         |
| Customs tariff number                | 85366930                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|                           |                       |
|---------------------------|-----------------------|
| Product type              | PCB headers           |
| Product family            | MSTB 2,5/...-GF-EX    |
| Product line              | COMBICON Connectors M |
| Type                      | Standard              |
| Number of positions       | 6                     |
| Pitch                     | 5.08 mm               |
| Number of connections     | 6                     |
| Number of rows            | 1                     |
| Number of potentials      | 6                     |
| Mounting flange           | Threaded flange       |
| Pin layout                | Linear pinning        |
| Solder pins per potential | 1                     |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 03 |
|------------------|----|

### Electrical properties

|                                         |                          |
|-----------------------------------------|--------------------------|
| Nominal current $I_N$                   | 12 A                     |
| Nominal voltage $U_N$                   | 176 V                    |
| Rated current / conductor cross section | 12 A/2.5 mm <sup>2</sup> |

### Ex data

#### Ex approval

|                                 |                                         |
|---------------------------------|-----------------------------------------|
| Identification                  | 0344 <sup>®</sup> II 2GD / Ex eb IIC Gb |
| EU-type examination certificate | KEMA 10ATEX0196 U                       |
| IECEx certificate               | IECEx KEM 10.0093U                      |

### Mounting

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

#### Flange

|                   |        |
|-------------------|--------|
| Tightening torque | 0.3 Nm |
|-------------------|--------|

#### Attachment on the PCB

|                   |                                                                  |
|-------------------|------------------------------------------------------------------|
| Tightening torque | 0.3 Nm                                                           |
| Screw             | Sheet metal screw ISO 1481-ST 2,2x6,5 C or ISO 7049-ST 2,2x6,5 C |

### Material specifications

#### Material data - contact

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|                                             |                                                                                  |
|---------------------------------------------|----------------------------------------------------------------------------------|
| 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 (3 - 5 µm Sn)                                                                |
| Metal surface contact area (middle layer)   | Nickel (1.3 - 3 µm Ni)                                                           |
| Metal surface soldering area (top layer)    | Tin (3 - 5 µm Sn)                                                                |
| Metal surface soldering area (middle layer) | Nickel (1.3 - 3 µm Ni)                                                           |

### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Color (Housing)                                                   | 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       |

### 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]             | 40.64 mm |
| Height [h]            | 11.8 mm  |
| Length [l]            | 12 mm    |
| Installed height      | 8.57 mm  |
| Solder pin length [P] | 3.23 mm  |
| Pin dimensions        | 1 x 1 mm |

### PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.4 mm |
|---------------|--------|

### Environmental and real-life conditions

#### Ambient conditions

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|                                         |                   |
|-----------------------------------------|-------------------|
| Ambient temperature (operation)         | -60 °C ... 110 °C |
| 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/1795705>

|                                                                                                                                             |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| <div> <b>ATEX</b><br/>Approval ID: KEMA 10ATEX0196 U</div> |                       |                       |                   |                             |
|                                                                                                                                             | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                                                                             | 176 V                 | 12 A                  | -                 | 0.2 - 2.5                   |

|                                                                                                                                               |                       |                       |                   |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| <div> <b>IECEx</b><br/>Approval ID: IECEx KEM 10.0093U</div> |                       |                       |                   |                             |
|                                                                                                                                               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                                                                               | 176 V                 | 12 A                  | -                 | 0.2 - 2.5                   |

|                                                                                                                                         |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <div> <b>EAC Ex</b><br/>Approval ID: B.00065/19</div> |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|                                                                                                                                             |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <div> <b>CCC</b><br/>Approval ID: 2021122313114375</div> |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27460201 |
| ECLASS-12.0 | 27460201 |
| ECLASS-13.0 | 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%               |

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