

# MSTBV 2,5/10-GF-5,08 EX - PCB header



1796403

<https://www.phoenixcontact.com/us/products/1796403>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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 rows: 1, number of positions: 10, product range: MSTBV 2,5/...-GF-EX, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 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 method: Threaded flange, type of packaging: packed in cardboard

## Your advantages

- Satisfies the more stringent safety requirements of "Ex eb" protection according to IEC 60079-7 for potentially explosive areas
- Screwable flange for superior mechanical stability
- Vertical connection enables multi-row arrangement on the PCB
- Well-known mounting principle allows worldwide use
- Closed contour for optimum stability of the plug-in connection

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1796403                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA03                           |
| Product key                          | AACSMK                         |
| Catalog page                         | Page 375 (C-1-2013)            |
| GTIN                                 | 4046356636513                  |
| Weight per piece (including packing) | 4.678 g                        |
| Weight per piece (excluding packing) | 4.031 g                        |
| Customs tariff number                | 85366930                       |
| Country of origin                    | DE                             |

# MSTBV 2,5/10-GF-5,08 EX - PCB header



1796403

<https://www.phoenixcontact.com/us/products/1796403>

## Technical data

### Product properties

|                           |                       |
|---------------------------|-----------------------|
| Product type              | PCB headers           |
| Product family            | MSTBV 2,5/..-GF-EX    |
| Product line              | COMBICON Connectors M |
| Type                      | Standard              |
| Number of positions       | 10                    |
| Pitch                     | 5.08 mm               |
| Number of rows            | 1                     |
| Mounting flange           | Threaded flange       |
| Pin layout                | Linear pinning        |
| Solder pins per potential | 1                     |

### 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>Ex</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

|                                        |                                                                                  |
|----------------------------------------|----------------------------------------------------------------------------------|
| 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)                                                                |

# MSTBV 2,5/10-GF-5,08 EX - PCB header



1796403

<https://www.phoenixcontact.com/us/products/1796403>

|                                             |                        |
|---------------------------------------------|------------------------|
| 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]             | 60.96 mm                                                                             |
| Height [h]            | 15.9 mm                                                                              |
| Length [l]            | 8.6 mm                                                                               |
| Installed height      | 12 mm                                                                                |
| Solder pin length [P] | 3.9 mm                                                                               |
| Pin dimensions        | 1 x 1 mm                                                                             |

## PCB design

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

## Environmental and real-life conditions

### Ambient conditions

|                                         |                   |
|-----------------------------------------|-------------------|
| 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  |

# MSTBV 2,5/10-GF-5,08 EX - PCB header



1796403

<https://www.phoenixcontact.com/us/products/1796403>

## Packaging specifications

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

# MSTBV 2,5/10-GF-5,08 EX - PCB header



1796403

<https://www.phoenixcontact.com/us/products/1796403>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1796403>



**ATEX**

Approval ID: KEMA 10ATEX0196 U

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 176 V                 | 12 A                  | -                 | 0.2 - 2.5                   |



**IECEX**

Approval ID: IECEX KEM 10.0093U

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 176 V                 | 12 A                  | -                 | 0.2 - 2.5                   |



**CCC**

Approval ID: 2021122313114375

# MSTBV 2,5/10-GF-5,08 EX - PCB header



1796403

<https://www.phoenixcontact.com/us/products/1796403>

## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

# MSTBV 2,5/10-GF-5,08 EX - PCB header



1796403

<https://www.phoenixcontact.com/us/products/1796403>

## 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% |
|-------------------------------------|----------------------------|

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

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