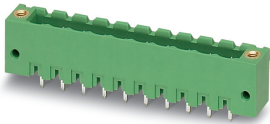


# Printed-circuit board connector - MSTBV 2,5/11-GF-5,08 6PA - 1701121

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PCB header, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, Number of potentials: 11, Number of rows: 1, Number of positions per row: 11, number of connections: 11, product range: MSTBV 2,5/..-GF, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard



The figure shows a 10-position version of the product

## Your advantages

- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- ✓ Well-known mounting principle allows worldwide use
- ✓ Vertical connection enables multi-row arrangement on the PCB
- ✓ Screwable flange for superior mechanical stability



## Key Commercial Data

|                        |               |
|------------------------|---------------|
| Packing unit           | 50 pc         |
| Minimum order quantity | 1000 pc       |
| GTIN                   |               |
| GTIN                   | 4046356515979 |

## Technical data

### Item properties

|                           |                     |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system            | CLASSIC COMBICON    |
| Type of contact           | Male connector      |
| Range of articles         | MSTBV 2,5/..-GF     |
| Pitch                     | 5.08 mm             |
| Number of positions       | 11                  |
| Mounting type             | Wave soldering      |
| Pin layout                | Linear pinning      |
| Locking                   | Threaded flange     |
| Number of levels          | 1                   |

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## Technical data

### Item properties

|                                 |          |
|---------------------------------|----------|
| Number of connections           | 11       |
| Number of potentials            | 11       |
| Pin connector pattern alignment | Standard |

### Electrical parameters

|                             |       |
|-----------------------------|-------|
| Nominal current             | 12 A  |
| Nom. voltage                | 320 V |
| Rated voltage (III/3)       | 250 V |
| Rated voltage (III/2)       | 320 V |
| Rated voltage (II/2)        | 400 V |
| Rated surge voltage (III/3) | 4 kV  |
| Rated surge voltage (III/2) | 4 kV  |
| Rated surge voltage (II/2)  | 4 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                     | 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

|  |              |
|--|--------------|
| Housing color                          | green (6021) |
| Insulating material                    | PBT          |
| Insulating material group              | IIIa         |
| CTI according to IEC 60112             | 225          |
| Flammability rating according to UL 94 | V0           |

### Flange specifications

|                 |                 |
|-----------------|-----------------|
| Type of locking | Screw locking   |
| Mounting flange | Threaded flange |
| Torque          | 0.3 Nm          |

### Dimensions for the product

|                             |  |
|-----------------------------|--|
| Caption                     | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ]                | 8.57 mm  |
| Width [ w ]                 | 66.04 mm   |
| Height [ h ]                | 15.9 mm  |
| Pitch                       | 5.08 mm  |
| Height (without solder pin) | 12 mm  |

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## Technical data

### Dimensions for the product

|                |          |
|----------------|----------|
| Solder pin [P] | 3.9 mm   |
| Pin dimensions | 1 x 1 mm |

### Dimensions for PCB design

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

### Packaging information

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

### General product information

|              |  |
|--------------|--|
| Type of note | Notes on operation   |
| 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) | 3 mm                |
| Minimum clearance - inhomogeneous field (III/2) | 3 mm                |
| Minimum clearance - inhomogeneous field (II/2)  | 3 mm                |
| Minimum creepage distance value (III/3)         | 4 mm                |
| Minimum creepage distance value (III/2)         | 3.2 mm              |
| Minimum creepage distance value (II/2)          | 4 mm                |

### Mechanical tests (A)

|  |             |
|--|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 8 N         |
| Withdraw strength per pos. approx.           | 6 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>      | 2.5 mΩ                |
| Insertion/withdrawal cycles            | 25                    |
| Contact resistance R <sub>2</sub>      | 2.6 mΩ                |
| Impulse withstand voltage at sea level | 4.8 kV                |

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## Technical data

### Thermal tests (C)

|   |                       |
|---|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 20                    |
| 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 | 4.8 kV  |
| Power-frequency withstand voltage      | 2.21 kV   |

### Environmental and durability tests (E)

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

### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:2007-12  |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Acceleration           | 5 g (60.1 - 150 Hz)    |
| Test duration per axis | 2.5 h                  |

### Standards and Regulations

|                                  |        |
|----------------------------------|--------|
| Connection in acc. with standard | EN-VDE |
|                                  | CUL    |

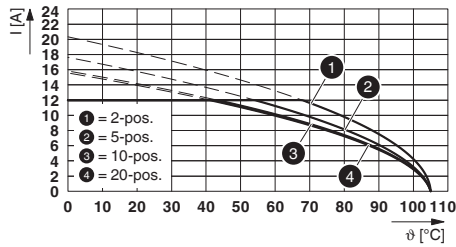
### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

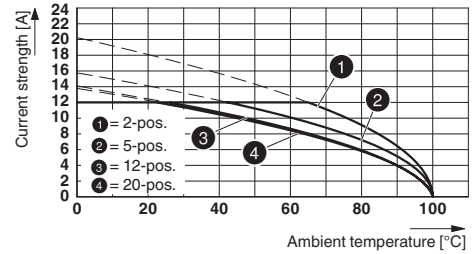
# Printed-circuit board connector - MSTBV 2,5/11-GF-5,08 6PA - 1701121

Diagram



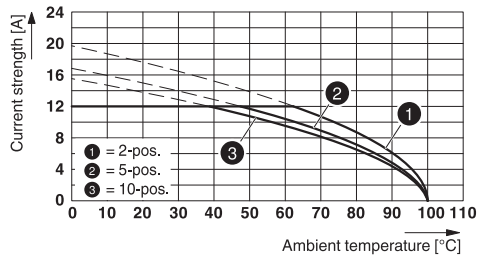
Type: LPC 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



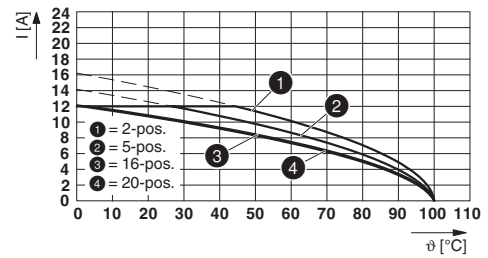
Type: MSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



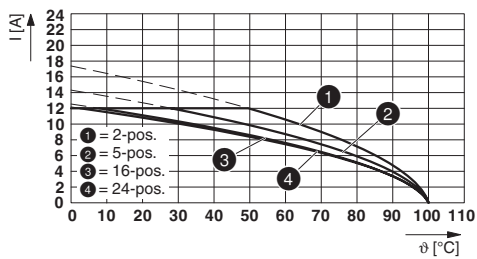
Type: TVMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



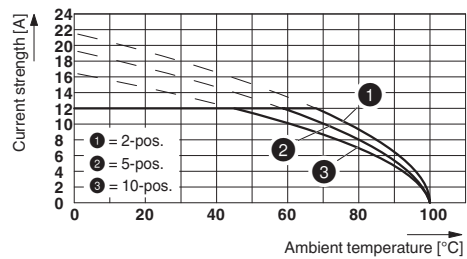
Type: MVSTB(R/W) 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



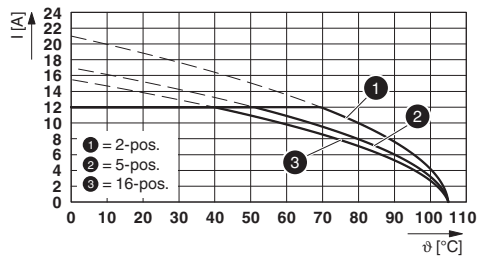
Type: SMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



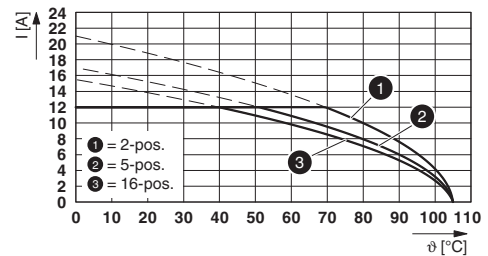
Type: TFKC 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



Type: FKCVR 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

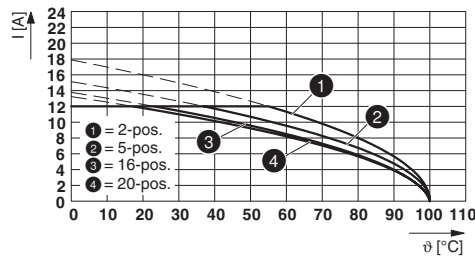
Diagram



Type: FKCVW 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

# Printed-circuit board connector - MSTBV 2,5/11-GF-5,08 6PA - 1701121

Diagram



Type: FRONT-MSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 272607xx |
| eCl@ss 4.1 | 27260701 |
| eCl@ss 5.0 | 27260701 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440402 |
| eCl@ss 9.0 | 27440402 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | 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 19.0   | 39121409 |

## Approvals

### Approvals

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DNV GL / VDE Zeichengenehmigung / RS / IECCE CB Scheme / EAC / cULus Recognized

# Printed-circuit board connector - MSTBV 2,5/11-GF-5,08 6PA - 1701121

## Approvals

Ex Approvals

### Approval details

|        |  |   |            |
|--------|--|---|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE00001EY |
|--------|--|---|------------|

|                        |       |   |          |
|------------------------|-------|---|----------|
| VDE Zeichengenehmigung |       | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40050648 |
| Nominal voltage UN     | 250 V |   |          |
| Nominal current IN     | 12 A  |   |          |

|    |  |   |              |
|----|--|---|--------------|
| RS |  | <a href="http://www.rs-head.spb.ru/en/index.php">http://www.rs-head.spb.ru/en/index.php</a> | 17.00014.272 |
|----|--|---|--------------|

|                    |       |   |                |
|--------------------|-------|---|----------------|
| IECEE CB Scheme    |       | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-60988-B1B2 |
| Nominal voltage UN | 250 V |   |                |
| Nominal current IN | 12 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> | E60425-19931011 |
| Nominal voltage UN | B     | D   |                 |
| Nominal current IN | 300 V | 300 V   |                 |
|                    | 12 A  | 10 A  |                 |

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