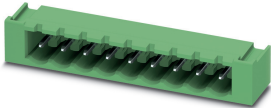


# Printed-circuit board connector - MSTBA 2,5/ 2-G-5,08-LR - 1809076

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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: 2, Number of rows: 1, Number of positions per row: 2, number of connections: 2, product range: MSTBA 2,5/..-G-LR, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, plug-in system: CLASSIC COMBICON, Locking: Snap-in locking, type of packaging: packed in cardboard



The figure shows a 5-pos. 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
- ✓ Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- ✓ Closed contour for optimum stability of the plug-in connection



## Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 50 pc         |
| GTIN         |               |
| GTIN         | 4046356702522 |

## Technical data

### Item properties

|                           |                                |
|---------------------------|--------------------------------|
| Brief article description | Feed-through header            |
| Plug-in system            | CLASSIC COMBICON               |
| Type of contact           | Male connector                 |
| Range of articles         | MSTBA 2,5/..-G-LR              |
| Pitch                     | 5.08 mm                        |
| Number of positions       | 2                              |
| Mounting type             | Wave soldering                 |
| Pin layout                | Linear pinning                 |
| Locking                   | Lock & release threaded flange |
| Number of levels          | 1                              |
| Number of connections     | 2                              |

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## Technical data

### Item properties

|                                 |          |
|---------------------------------|----------|
| Number of potentials            | 2        |
| 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 µm Ni)  |
| Metal surface soldering area (top layer)    | Tin (3 - 5 µm Sn)   |
| Metal surface soldering area (middle layer) | Nickel (1 - 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           |

### Dimensions for the product

|                             |  |
|-----------------------------|--|
| Caption                     | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ]                | 12 mm  |
| Width [ w ]                 | 20.32 mm   |
| Height [ h ]                | 12.1 mm  |
| Pitch                       | 5.08 mm  |
| Height (without solder pin) | 8.6 mm   |
| Solder pin [P]              | 3.5 mm   |
| Pin dimensions              | 1 x 1 mm   |

### Dimensions for PCB design

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

### Packaging information

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## Technical data

### 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                |

### Current carrying capacity / derating curves

|         |  |
|---------|--|
| Caption | Type: FKCO(R/W) 2,5/...-ST-5,08-LR with MSTBA(R/W) 2,5/...-G-5,08-LR |
|---------|--|

### Mechanical tests (A)

|  |             |
|--|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 8 N         |
| Withdraw strength per pos. approx.           | 11 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>      | 1.3 mΩ                |
| Insertion/withdrawal cycles            | 25                    |
| Contact resistance R <sub>2</sub>      | 1.3 mΩ                |
| Impulse withstand voltage at sea level | 4.8 kV                |

### Thermal tests (C)

|                     |                       |
|---------------------|-----------------------|
| Specification       | IEC 60512-5-1:2002-02 |
| Number of positions | 24                    |

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## Technical data

### Thermal tests (C)

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

### Standards and Regulations

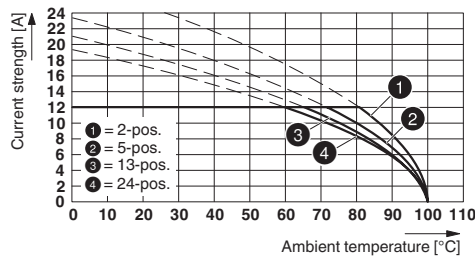
|  |        |
|--|--------|
| Connection in acc. with standard       | EN-VDE |
|  | CUL    |
| Flammability rating according to UL 94 | V0     |

### Environmental Product Compliance

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

## Drawings

Diagram



Type: FKCO(RW) 2,5/...-ST-5,08-LR with MSTBA(RW) 2,5/...-G-5,08-LR

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| eCl@ss 11.0   | 27460201 |
| eCl@ss 4.0    | 27260700 |
| eCl@ss 4.1    | 27260700 |
| eCl@ss 5.0    | 27260700 |

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| 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 18.0   | 39121409 |
| UNSPSC 19.0   | 39121409 |
| UNSPSC 20.0   | 39121409 |
| UNSPSC 21.0   | 39121409 |

## Approvals


### Approvals

#### Approvals

VDE Zeichengenehmigung / IECCE CB Scheme / EAC / cULus Recognized

#### Ex Approvals

### Approval details

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

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## Approvals

|                    |                     |   |                |
|--------------------|---------------------|---|----------------|
| IECEE CB Scheme    | <b>CB</b><br>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>EAC</b> | B.01687 |
|-----|------------|---------|

|                    |              |   |                 |
|--------------------|--------------|---|-----------------|
| cULus Recognized   | <b>cULus</b> | <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 |
|                    |              | B   | D               |
| Nominal voltage UN |              | 300 V   | 300 V           |
| Nominal current IN |              | 15 A  | 10 A            |

## Accessories

### Accessories

#### Coding element

Coding section - CR-MSTB - 1734401

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



#### Filler plug

Accessories - MSTB-BL - 1755477



Keying cap, for forming sections, plugs onto header pin, green insulating material

#### Labeled terminal marker

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### Accessories

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

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