

# Printed-circuit board connector - MSTBVA 2,5/ 3-G-RN - 1944602

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, Article with engagement nose



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
- ✓ Closed contour for optimum stability of the plug-in connection
- ✓ Intuitive locking mechanism prevents accidental disconnection



## Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 50 pc         |
| GTIN         |               |
| GTIN         | 4017918890889 |

## Technical data

### Item properties

|                           |                     |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system            | CLASSIC COMBICON    |
| Type of contact           | Male connector      |
| Range of articles         | MSTBVA 2,5/...-G-RN |
| Pitch                     | 5 mm                |
| Number of positions       | 3                   |
| Mounting type             | Wave soldering      |
| Pin layout                | Linear pinning      |
| Locking                   | Engagement nose     |
| Number of levels          | 1                   |

# Printed-circuit board connector - MSTBVA 2,5/ 3-G-RN - 1944602

## Technical data

### Item properties

|                       |   |
|-----------------------|---|
| Number of connections | 3 |
| Number of potentials  | 3 |

### Electrical parameters

|                             |       |
|-----------------------------|-------|
| Nominal current             | 12 A  |
| Nom. voltage                | 320 V |
| Rated voltage               | 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           |

### Dimensions for the product

|                             |          |
|-----------------------------|----------|
| Length [ l ]                | 8.57 mm  |
| Width [ w ]                 | 17 mm    |
| Height [ h ]                | 15.9 mm  |
| Pitch                       | 5 mm     |
| Height (without solder pin) | 12 mm    |
| 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 |
|-------------------|---------------------|

# Printed-circuit board connector - MSTBVA 2,5/ 3-G-RN - 1944602

## Technical data

### Packaging information

|                            |      |
|----------------------------|------|
| Pieces per package         | 50   |
| Denomination packing units | Pcs. |

### 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>      | 2.1 mΩ                |
| Insertion/withdrawal cycles            | 25                    |
| Contact resistance R <sub>2</sub>      | 2.2 mΩ                |
| Impulse withstand voltage at sea level | 4.8 kV                |
| Power-frequency withstand voltage      | 2.21 kV               |

### Thermal tests (C)

|   |                       |
|---|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 18                    |
| Conductor cross section                         | 2.5 mm <sup>2</sup>   |
| Test current                                    | 12 A                  |
| 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     |

# Printed-circuit board connector - MSTBVA 2,5/ 3-G-RN - 1944602

## Technical data

### Climatic tests (D)

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

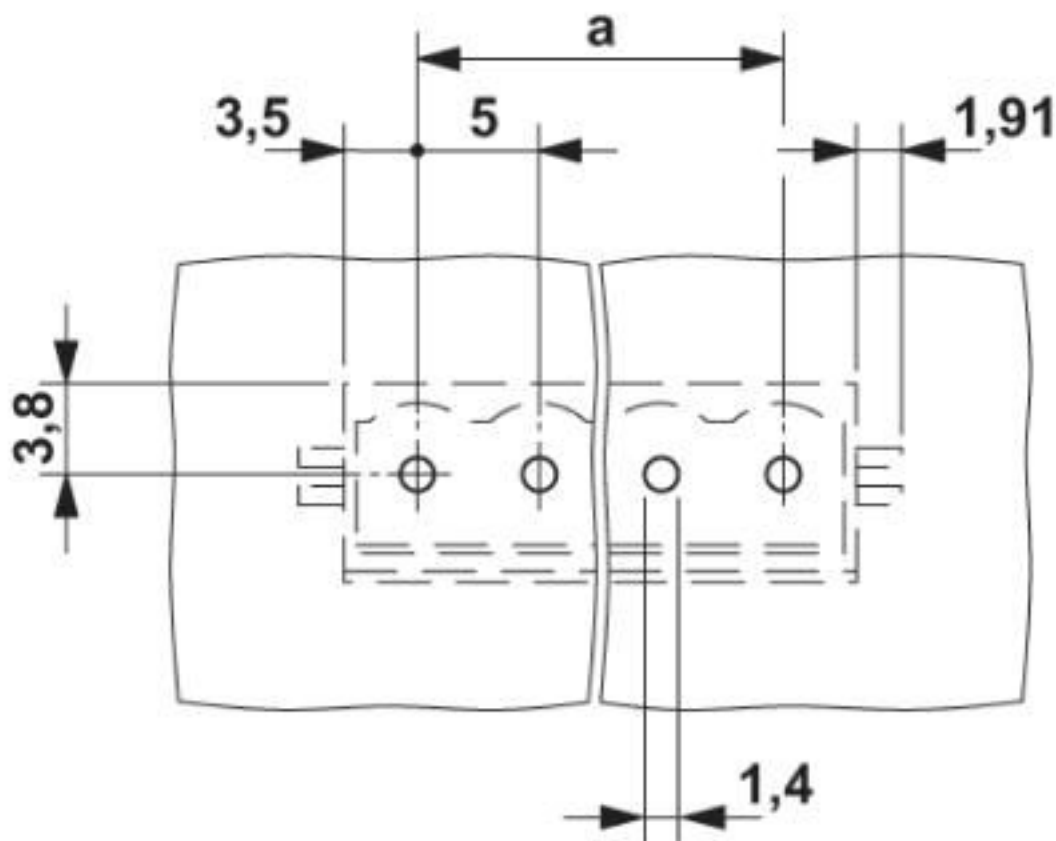
|  |        |
|--|--------|
| Connection in acc. with standard       | EN-VDE |
|  | CUL    |
| Flammability rating according to UL 94 | V0     |

### Environmental Product Compliance

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

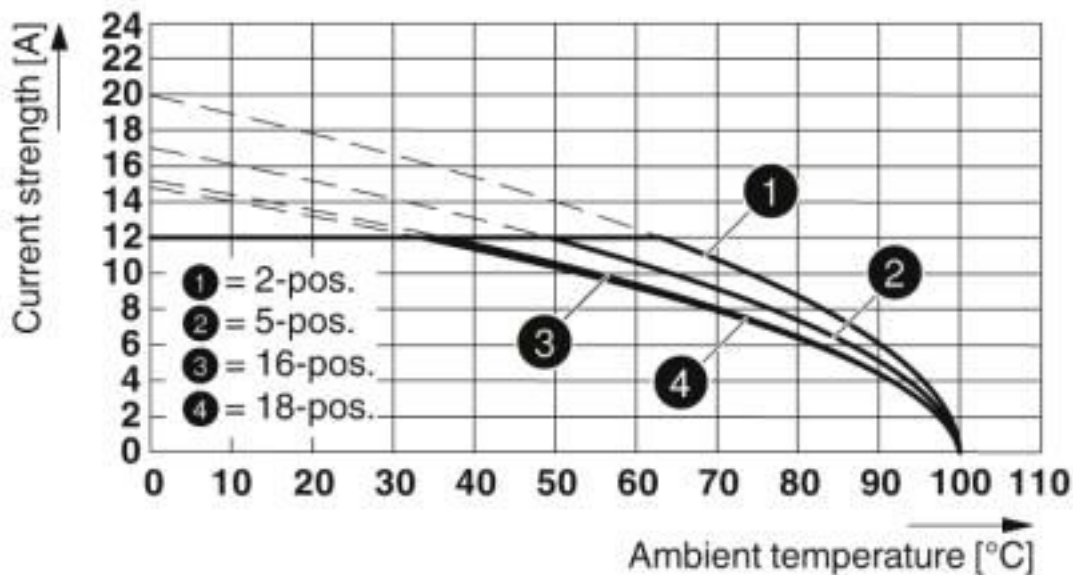
## Drawings

Drilling diagram



# Printed-circuit board connector - MSTBVA 2,5/ 3-G-RN - 1944602

Diagram



Type: FKC 2,5/...-ST-RF with MSTBVA 2,5/...-G-RN

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| eCl@ss 4.0    | 27260700 |
| eCl@ss 4.1    | 27260700 |
| eCl@ss 5.0    | 27260700 |
| eCl@ss 5.1    | 27260700 |
| eCl@ss 6.0    | 27260700 |
| eCl@ss 7.0    | 27440402 |
| eCl@ss 8.0    | 27440402 |
| eCl@ss 9.0    | 27440402 |

## ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002637 |
| ETIM 5.0 | 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 |

# Printed-circuit board connector - MSTBVA 2,5/ 3-G-RN - 1944602

## Classifications

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 39121409 |
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

## Approvals

### Approvals

#### Approvals

IECEE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

#### Ex Approvals

### Approval details

|                    |       |   |                |
|--------------------|-------|---|----------------|
| 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 |
|                    | B     | D   |                 |
| Nominal voltage UN | 300 V | 300 V   |                 |
| Nominal current IN | 12 A  | 10 A  |                 |

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

## Printed-circuit board connector - MSTBVA 2,5/ 3-G-RN - 1944602

### Approvals

|                                |      |
|--------------------------------|------|
| Nominal current I <sub>N</sub> | 12 A |
|--------------------------------|------|

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstr. 8

32825 Blomberg

Germany

Tel. +49 5235 300

Fax +49 5235 3 41200

<http://www.phoenixcontact.com>

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Pluggable Terminal Blocks](#) category:*

*Click to view products by [Phoenix Contact](#) manufacturer:*

Other Similar products are found below :

[57.510.0053](#) [MC 1.5/ 6-ST-3.5 GY AU](#) [734-104](#) [734-302](#) [8-141-P](#) [8426620000](#) [860505](#) [860810](#) [GBPACX-12](#) [93.731.4953.0](#) [PV05-5,08-K](#)  
[PVP02-5,00](#) [PVP03-3,50](#) [PVP04-3,50](#) [PVS02-5,00](#) [1-1986160-3](#) [1377680000](#) [1531000000](#) [1546228-5](#) [ELFH16150](#) [ELFP03110](#)  
[ELFP10210](#) [ELFT06250](#) [ELVP03100](#) [1700101](#) [1700410](#) [1700425](#) [1702246](#) [1705229](#) [1710175](#) [1714537](#) [1717806](#) [1719600](#) [1728941](#)  
[1734692](#) [1734795](#) [1736036](#) [1740194](#) [1740291](#) [1740628](#) [1740990](#) [1746952](#) [1750207](#) [1752441](#) [1752865](#) [1754115](#) [1754144](#) [1756913](#)  
[1760051](#) [1760336](#)