

# Feed-through header - GMSTBV 2,5/ 7-GF-7,62 - 1829206

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PCB headers, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm




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
- ✓ Larger pitch for increased voltage requirements
- ✓ Vertical connection enables multi-row arrangement on the PCB



## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 50 pc   |
| GTIN         | <br>4 017918 050962 |
| GTIN         | 4017918050962   |

## Technical data

### Item properties

|                           |                     |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system            | CLASSIC COMBICON    |
| Type of contact           | Male connector      |
| Range of articles         | GMSTBV 2,5/...-GF   |
| Pitch                     | 7.62 mm             |
| Number of positions       | 7                   |
| Mounting type             | Wave soldering      |
| Pin layout                | Linear pinning      |
| Locking                   | Threaded flange     |
| Number of levels          | 1                   |
| Number of connections     | 7                   |

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## Technical data

### Item properties

|                      |   |
|----------------------|---|
| Number of potentials | 7 |
|----------------------|---|

### Electrical parameters

|                             |       |
|-----------------------------|-------|
| Nominal current             | 12 A  |
| Nom. voltage                | 630 V |
| Rated voltage               | 400 V |
| Rated voltage (III/2)       | 630 V |
| Rated voltage (II/2)        | 630 V |
| Rated surge voltage (III/3) | 6 kV  |
| Rated surge voltage (III/2) | 6 kV  |
| Rated surge voltage (II/2)  | 6 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   | 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       |

### Dimensions for the product

|                             |          |
|-----------------------------|----------|
| Length [ l ]                | 8.6 mm   |
| Width [ w ]                 | 63.92 mm |
| Height [ h ]                | 15.9 mm  |
| Pitch                       | 7.62 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 |
|---------------|--------|

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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

|      |  |
|------|--|
| 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. |
|      | 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) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (III/2) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (II/2)  | 5.5 mm              |
| Minimum creepage distance value (III/3)         | 6.3 mm              |
| Minimum creepage distance value (III/2)         | 5.5 mm              |
| Minimum creepage distance value (II/2)          | 5.5 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>            | 2.4 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Contact resistance R <sub>2</sub>            | 2.5 mΩ                |
| Impulse withstand voltage at sea level       | 7.3 kV                |
| Power-frequency withstand voltage            | 3.31 kV               |
| Insulation resistance, neighboring positions | > 50 GΩ               |

### Thermal tests (C)

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
|---------------|-----------------------|

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### Technical data

#### Thermal tests (C)

|   |                     |
|---|---------------------|
| Number of positions                             | 12                  |
| 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      |
| Corrosive stress                       | KFW 0.2 S/1 cycle |
| Impulse withstand voltage at sea level | 7.3 kV            |
| Power-frequency withstand voltage      | 3.31 kV           |

#### Environmental and durability tests (E)

|                                       |                   |
|---------------------------------------|-------------------|
| Specification                         | IEC 61984:2008-10 |
| Result, degree of protection, IP code | IP20              |

#### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:2007-12  |
| Result                 | Test passed            |
| 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 |
|  | CSA    |
| Flammability rating according to UL 94 | V0     |

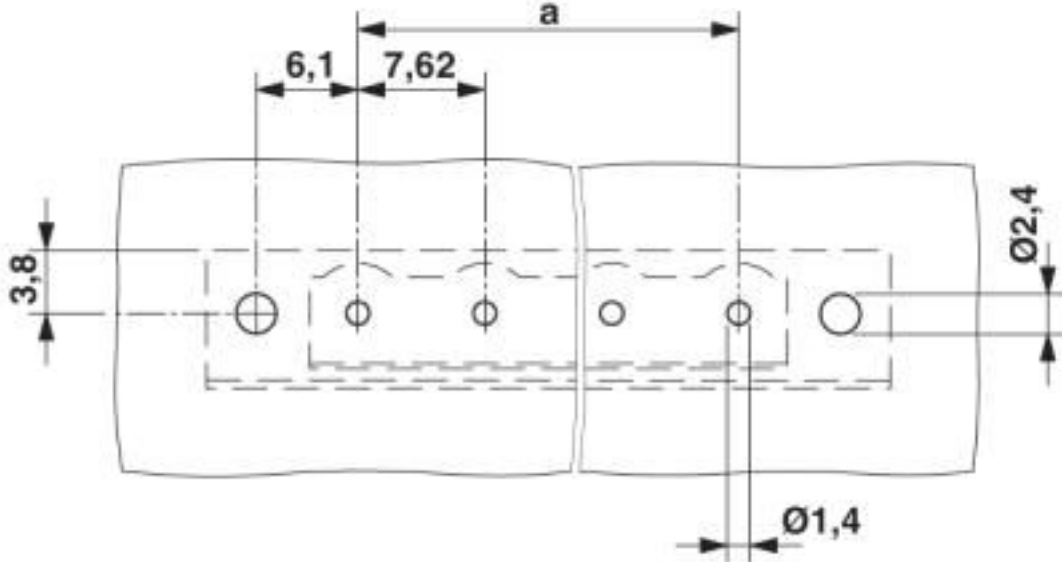
#### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

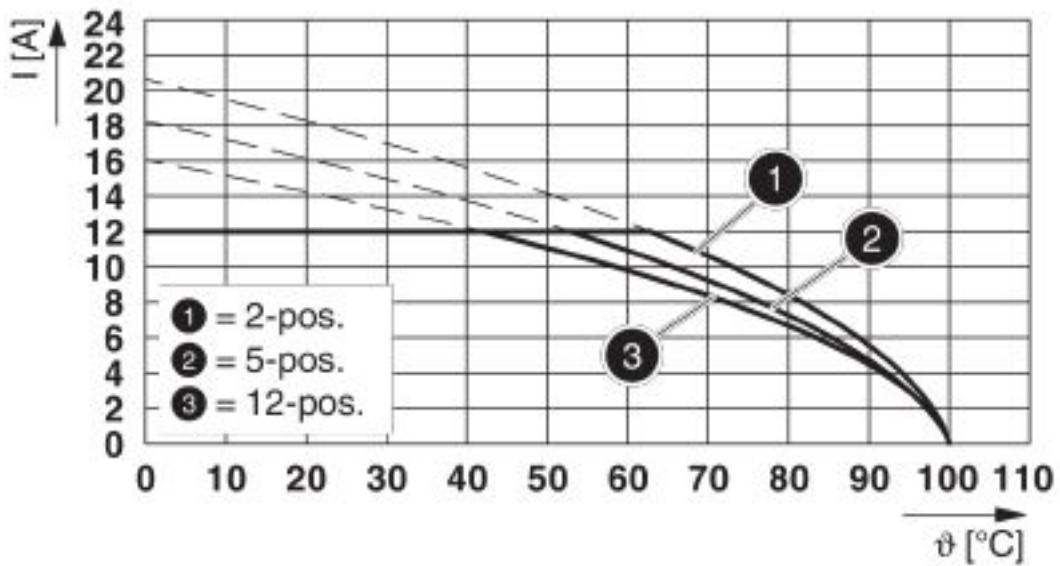
### Drawings

# Feed-through header - GMSTBV 2,5/ 7-GF-7,62 - 1829206

Drilling diagram



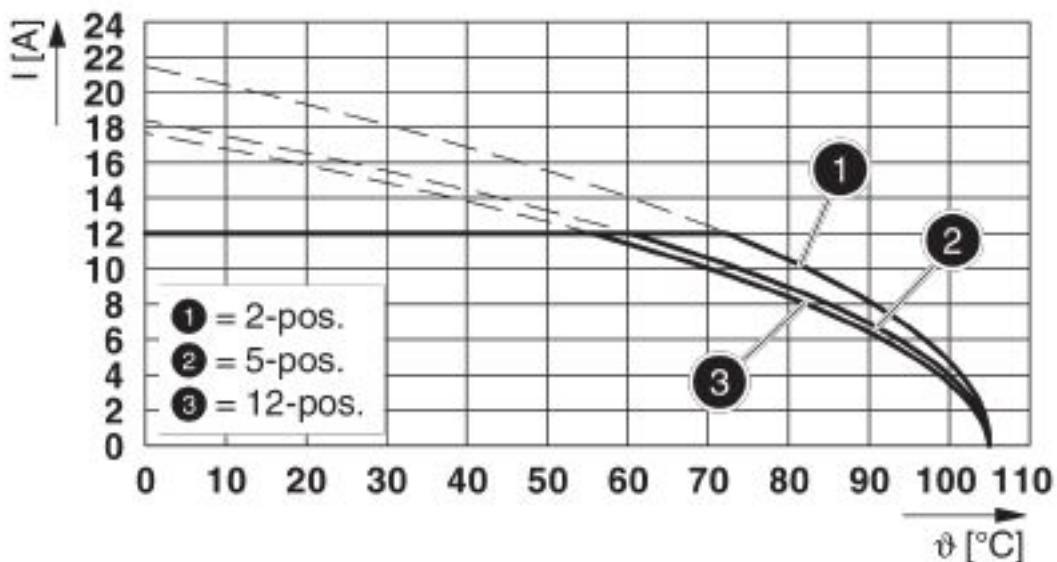
Diagram



Type: GMSTB 2,5/...-STF-7,62 with GMBSTBV 2,5/...-GF-7,62

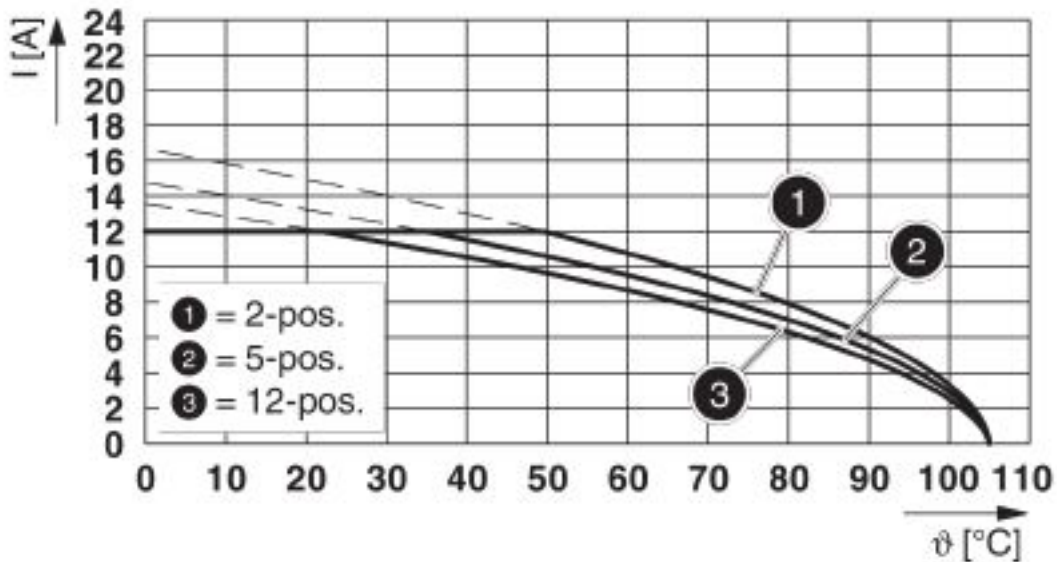
# Feed-through header - GMSTBV 2,5/ 7-GF-7,62 - 1829206

Diagram



Type: GFKC 2,5/...-STF-7,62 with GMSTBV 2,5/...-GF-7,62

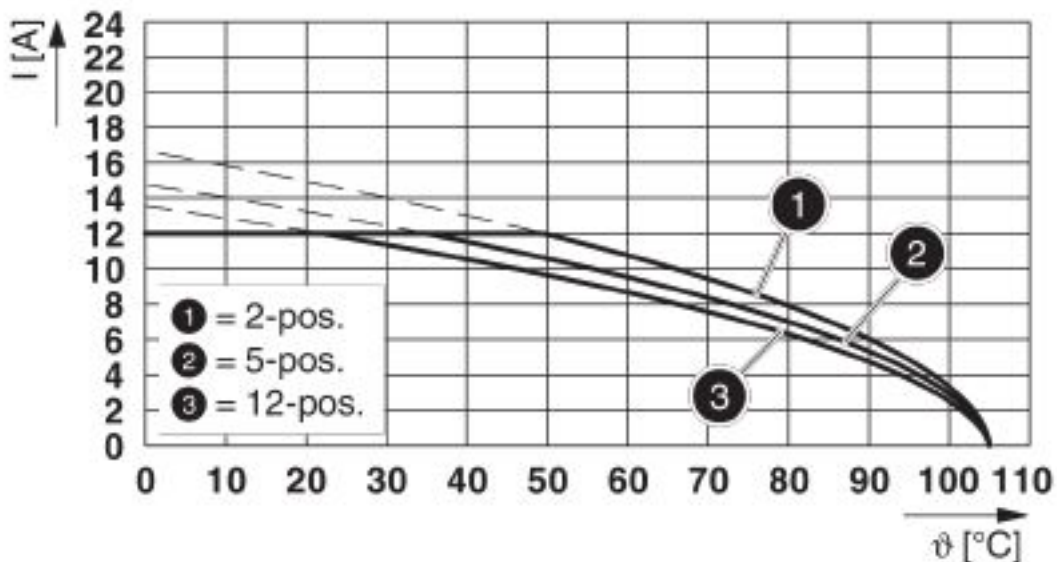
Diagram



Type: GMVSTBR 2,5/...-STF-7,62 with GMSTBV 2,5/...-GF-7,62

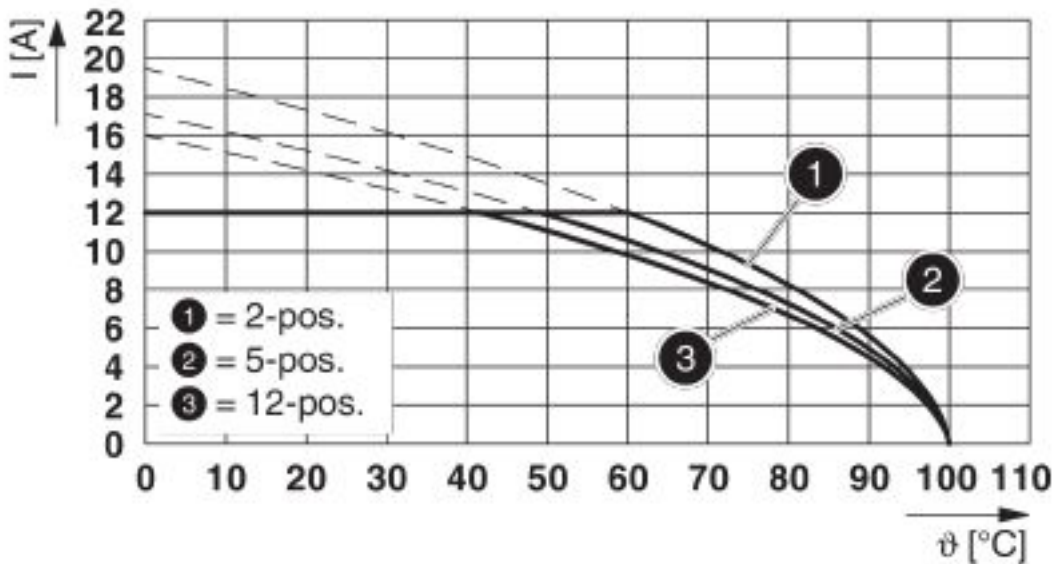
# Feed-through header - GMSTBV 2,5/ 7-GF-7,62 - 1829206

Diagram



Type: GMVSTBW 2,5/...-STF-7,62 with GMSTBV 2,5/...-GF-7,62

Diagram



Type: FRONT-GMSTB 2,5/...-STF-7,62 with GMSTBV 2,5/...-GF-7,62

## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| eCl@ss 4.0    | 27260700 |

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### Classifications

#### eCl@ss

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

### Approvals

#### Approvals

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##### Approvals

CSA / IEC EE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

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##### Ex Approvals

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#### Approval details



# Feed-through header - GMSTBV 2,5/ 7-GF-7,62 - 1829206

## Approvals

|                    |  |   |       |
|--------------------|--|---|-------|
| CSA                |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
| Nominal voltage UN |  | 300 V   |       |
| Nominal current IN |  | 10 A  |       |

|                    |  |   |                |
|--------------------|--|---|----------------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-60988-B1B2 |
| Nominal voltage UN |  | 400 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> | E60425-19931013 |
|                    | B     | D   |                 |
| Nominal voltage UN | 300 V | 300 V   |                 |
| Nominal current IN | 15 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     |  | 400 V   |          |
| Nominal current IN     |  | 12 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



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## Accessories

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### Filler plug

Accessories - MSTB-BL - 1755477



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

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### Labeled terminal marker

Marker card - SK 7,62/3,8:FORTL.ZAHLEN - 0804549



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: 7.62 x 3.8 mm

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### Additional products

Printed-circuit board connector - FRONT-GMSTB 2,5/ 7-STF-7,62 - 1806054



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Front screw connection, color: green, contact surface: Tin

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Printed-circuit board connector - GMVSTBR 2,5/ 7-STF-7,62 - 1847932



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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Printed-circuit board connector - GMVSTBW 2,5/ 7-STF-7,62 - 1848041



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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## Feed-through header - GMSTBV 2,5/ 7-GF-7,62 - 1829206

### Accessories

#### Printed-circuit board connector - GMSTB 2,5/ 7-STF-7,62 - 1858811

PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



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#### Printed-circuit board connector - GFKC 2,5/ 7-STF-7,62 - 1939798

PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Push-in spring connection, color: green, contact surface: Tin, COMBICON connectors may only be activated under no load conditions. If for operating reasons small loads must be switched, experimental values are available upon request.



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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>

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