

GMSTBA 2,5/ 2-G-7,62 - PCB header



1766233

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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Pin, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: GMSTBA 2,5/..-G, pitch: 7.62 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

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
- Closed contour for optimum stability of the plug-in connection
- Plug-in direction parallel to the PCB

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 1766233 |
| Packing unit | 1 pc |
| Minimum order quantity | 250 pc |
| Sales key | AA03 |
| Product key | AACSJD |
| Catalog page | Page 343 (C-1-2013) |
| GTIN | 4017918032258 |
| Weight per piece (including packing) | 1.09 g |
| Weight per piece (excluding packing) | 0.96 g |
| Customs tariff number | 85366930 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|---------------------------|-----------------------|
| Type | Standard |
| Product line | COMBICON Connectors M |
| Product type | PCB headers |
| Product family | GMSTBA 2,5/...-G |
| Number of positions | 2 |
| Pitch | 7.62 mm |
| Number of connections | 2 |
| Number of rows | 1 |
| Mounting flange | without |
| Number of potentials | 2 |
| Pin layout | Linear pinning |
| Solder pins per potential | 1 |

Electrical properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 12 A |
| Nominal voltage U_N | 630 V |
| Degree of pollution | 3 |
| Contact resistance | 1.4 mΩ |
| Rated voltage (III/3) | 400 V |
| Rated surge voltage (III/3) | 6 kV |
| Rated voltage (III/2) | 630 V |
| Rated surge voltage (III/2) | 6 kV |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 6 kV |

Mounting

| | |
|---------------|----------------|
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |

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) |
| 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

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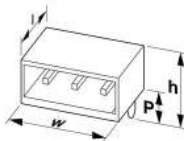
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| | |
|-------------------------------------------------------------------|--------------|
| Color (Housing) | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating 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 | 7.62 mm |
| Width [w] | 15.24 mm |
| Height [h] | 11.8 mm |
| Length [l] | 12 mm |
| Installed height | 8.6 mm |
| Solder pin length [P] | 3.2 mm |
| Pin dimensions | 1 x 1 mm |

Mechanical tests

Visual inspection

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result | Test passed |

Dimension check

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result | Test passed |

Resistance of inscriptions

| | |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result | Test passed |

Polarization and coding

| | |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result | Test passed |

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Contact holder in insert

| | |
|------------------------------------------------|------------------------|
| Specification | IEC 60512-15-1:2008-05 |
| Contact holder in insert Requirements >20 N | Test passed |

Insertion and withdrawal forces

| | |
|-------------------------------------|-------------|
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 9 N |
| Withdraw strength per pos. approx. | 6 N |

Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 12 |

Insulation resistance

| | |
|----------------------------------------------|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ |

Air clearances and creepage distances |

| | |
|--------------------------------------------------------|---------------------|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 400 V |
| Rated surge voltage (III/3) | 6 kV |
| minimum clearance value - non-homogenous field (III/3) | 5.5 mm |
| minimum creepage distance (III/3) | 5.5 mm |
| Rated insulation voltage (III/2) | 630 V |
| Rated surge voltage (III/2) | 6 kV |
| minimum clearance value - non-homogenous field (III/2) | 5.5 mm |
| minimum creepage distance (III/2) | 5.5 mm |
| Rated insulation voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 6 kV |
| minimum clearance value - non-homogenous field (II/2) | 5.5 mm |
| minimum creepage distance (II/2) | 5.5 mm |

Environmental and real-life conditions

Vibration test

| | |
|---------------|-----------------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 Hz ... 60.1 Hz) |
| Sweep speed | 5g (60.1 Hz ... 150 Hz) |

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| | |
|------------------------|-------|
| Test duration per axis | 2.5 h |
|------------------------|-------|

Durability test

| | |
|----------------------------------------------|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 7.3 kV |
| Contact resistance R ₁ | 1.4 mΩ |
| Contact resistance R ₂ | 1.5 mΩ |
| Insertion/withdrawal cycles | 25 |
| Insulation resistance, neighboring positions | > 5 MΩ |

Climatic test

| | |
|-----------------------------------|---------------------------------------------------------------------------|
| Specification | ISO 6988:1985-02 |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Thermal stress | 100 °C/168 h |
| Power-frequency withstand voltage | 3.31 kV |

Ambient conditions

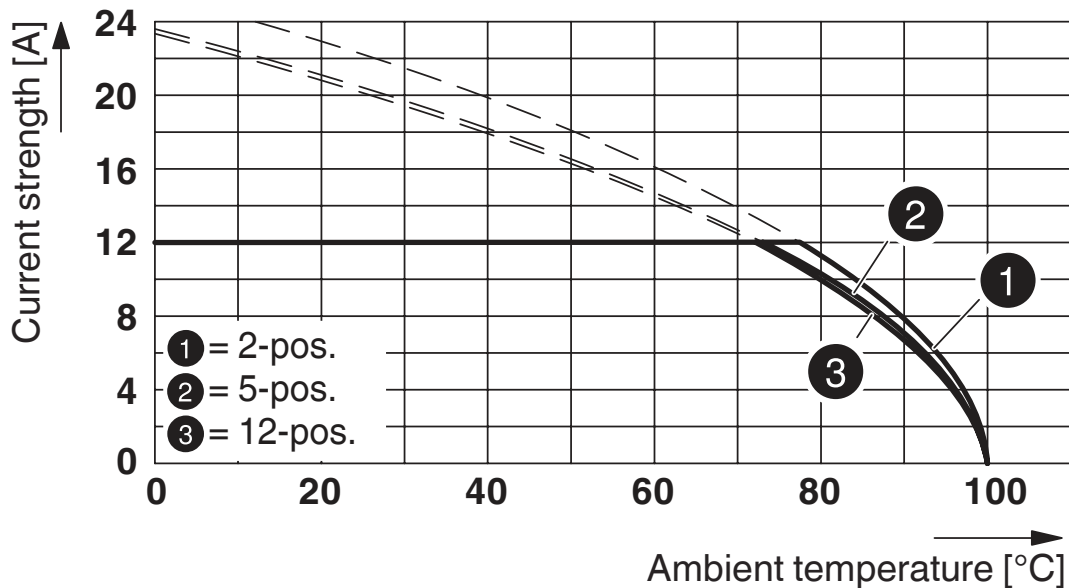
| | |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

Packaging specifications

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

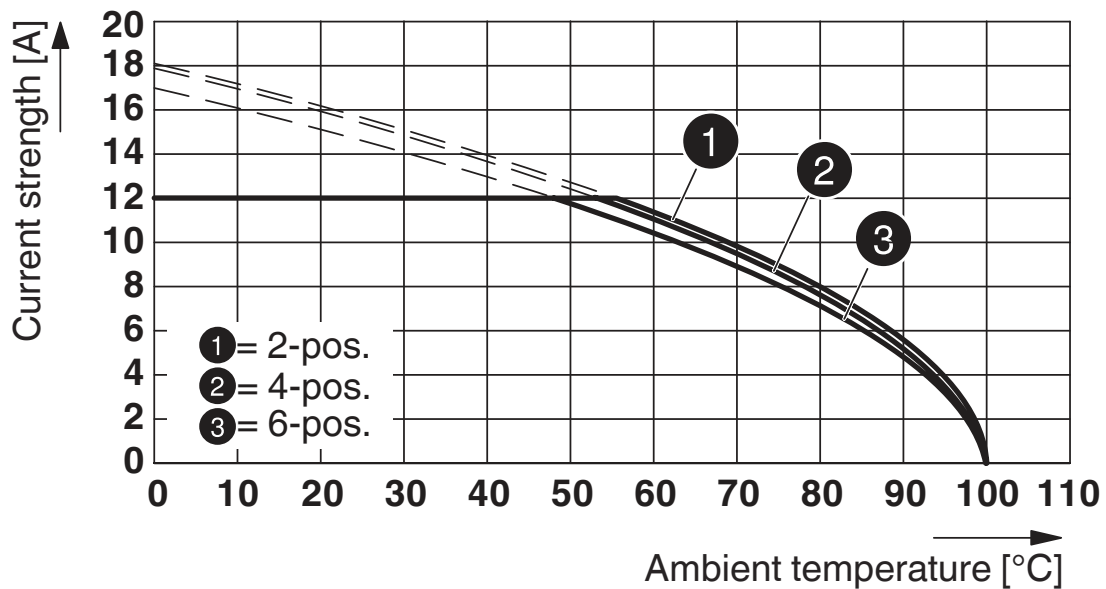
Drawings

Diagram



Type: GMSTB 2,5/...-ST-7,62 with GMSTBA 2,5/...-G-7,62

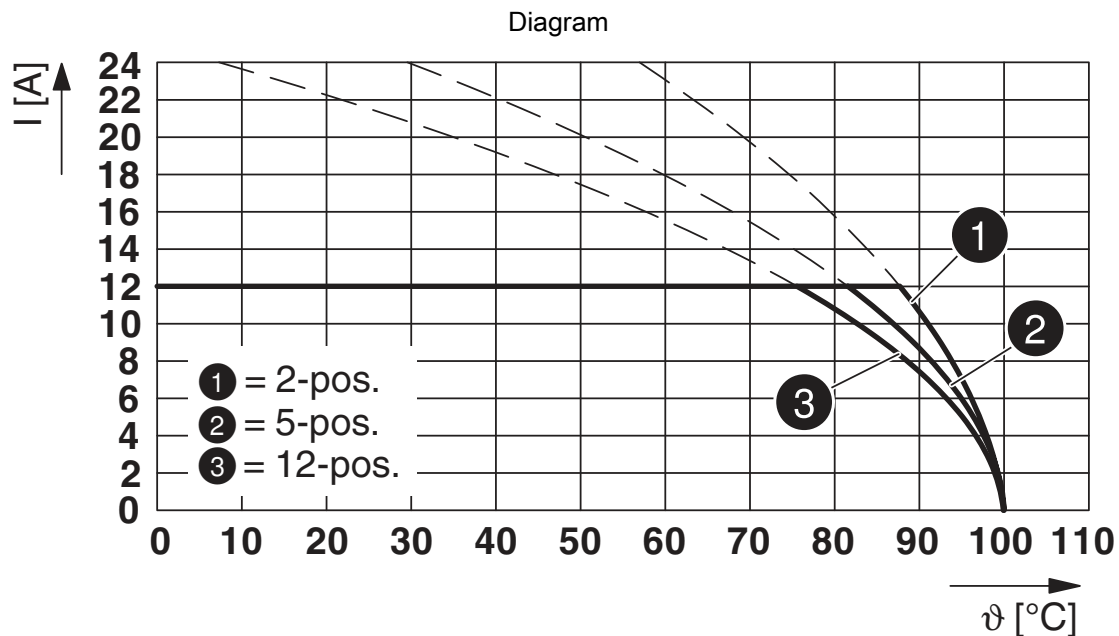
Diagram



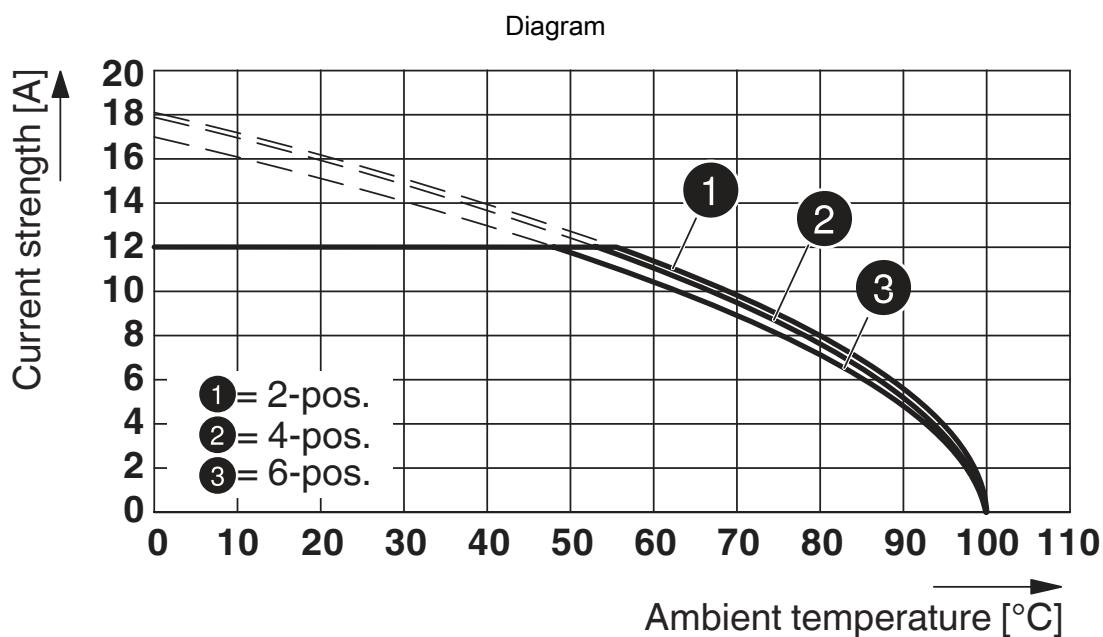
Type: GMVSTBR 2,5 HV/...-ST-7,62 with GMSTBA 2,5/...-G-7,62

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Type: GFKC 2,5/...-ST-7,62 with GMSTBA 2,5/...-G-7,62



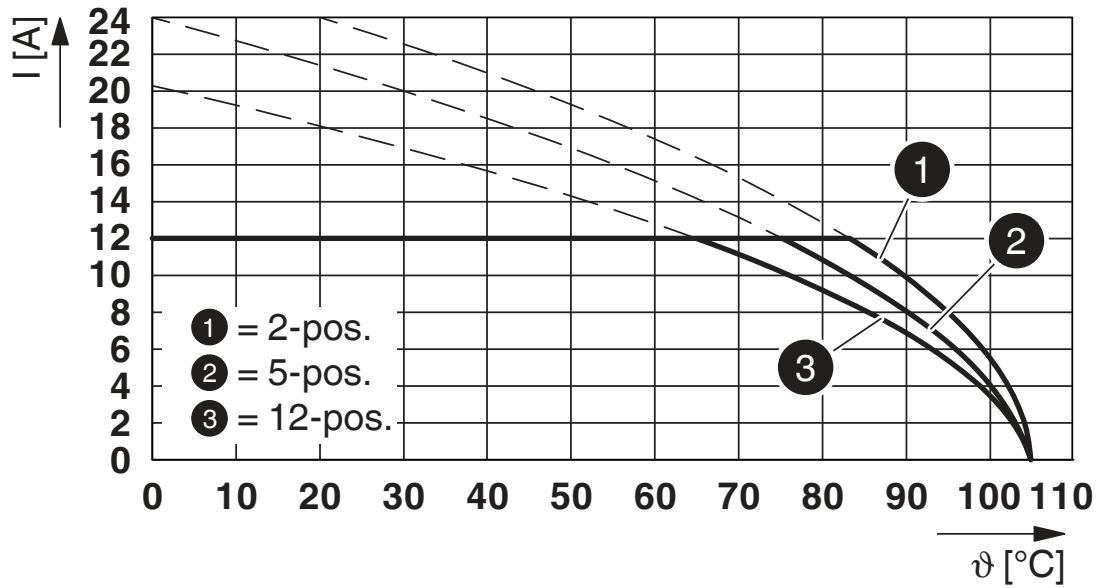
Type: GMVSTBW 2,5 HV/...-ST-7,62 with GMSTBA 2,5/...-G-7,62

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Diagram



Type: GIC 2,5/...-G-7,62 with GMSTBA 2,5/...-G-7,62

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1766233>

|  CSA Approval ID: 13631 | | | | |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Use group B | 300 V | 10 A | - | - |
| Use group D | 300 V | 10 A | - | - |

|  EAC Approval ID: B.01687 | | | | |
|----------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|----------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|  cULus Recognized Approval ID: E60425-19931013 | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Use group B | 300 V | 15 A | - | - |
| Use group D | 300 V | 10 A | - | - |

|  VDE Zeichengenehmigung Approval ID: 40050648 | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 400 V | 12 A | - | - |

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

UNSPSC

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

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Environmental product compliance

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

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Accessories

CR-MSTB - Coding section

1734401

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



MSTB-BL - Accessories

1755477

<https://www.phoenixcontact.com/us/products/1755477>

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



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

0804549

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Marker 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

GMSTB 2,5/ 2-ST-7,62 - PCB connector

1766990

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: GMSTB 2,5/..-ST, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

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FRONT-GMSTB 2,5/ 2-ST-7,62 - PCB connector

1806119

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: FRONT-GMSTB 2,5/..-ST, pitch: 7.62 mm, connection method: Front screw connection, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

GMVSTBW 2,5/ 2-ST-7,62 - PCB connector

1832413

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: GMVSTBW 2,5/..-ST, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

GMSTBA 2,5/ 2-G-7,62 - PCB header

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GMVSTBR 2,5/ 2-ST-7,62 - PCB connector

1832523

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: GMVSTBR 2,5/...-ST, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

GFKC 2,5/ 2-ST-7,62 - PCB connector

1939633

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: GFKC 2,5/...-ST, pitch: 7.62 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

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