

Feed-through header - GMSTBVA 2,5/ 6-G - 1766709

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PCB headers, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm², number of positions: 6, pitch: 7.5 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
- ✓ Closed contour for optimum stability of the plug-in connection
- ✓ Vertical connection enables multi-row arrangement on the PCB



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 100 pc |
| GTIN | |
| GTIN | 4017918032722 |

Technical data

Item properties

| | |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system | CLASSIC COMBICON |
| Type of contact | Male connector |
| Range of articles | GMSTBVA 2,5/...-G |
| Pitch | 7.5 mm |
| Number of positions | 6 |
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |
| Locking | without |
| Number of levels | 1 |

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Technical data

Item properties

| | |
|-----------------------|---|
| Number of connections | 6 |
| Number of potentials | 6 |

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] | 8.57 mm |
| Width [w] | 44.95 mm |
| Height [h] | 15.9 mm |
| Pitch | 7.5 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 |
|---------------|--------|

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Technical data

Packaging information

| | |
|----------------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 100 |
| 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 ₁ | 3.7 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 3.8 mΩ |
| Impulse withstand voltage at sea level | 7.3 kV |
| Power-frequency withstand voltage | 3.31 kV |
| Insulation resistance, neighboring positions | > 75 TΩ |

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 ² |
| Test current | 12 A DC |
| 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 ³ SO ₂ on 300 dm ³ /40 °C/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 | Finger safety with IP20 test finger |

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 |

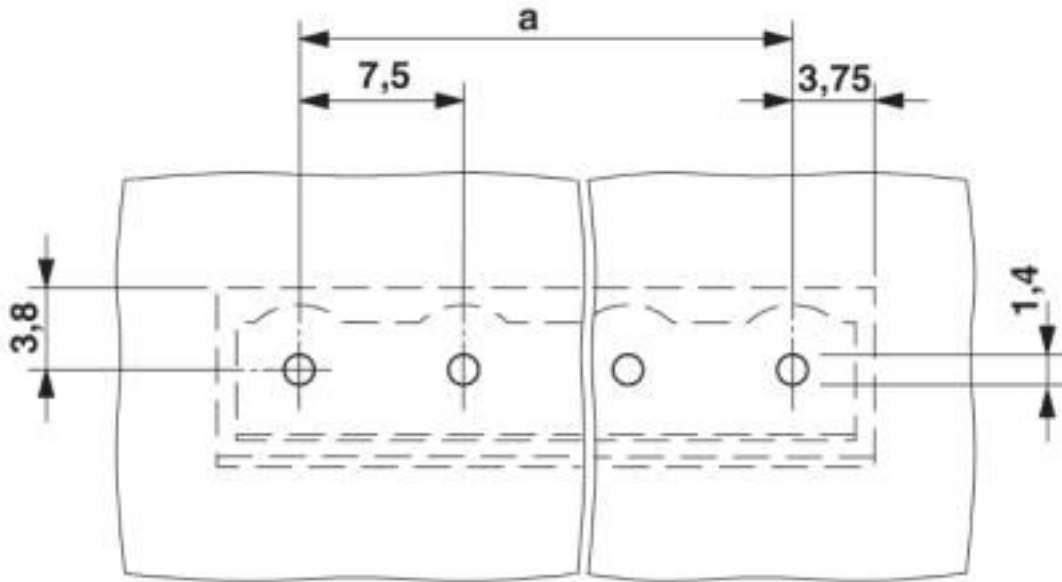
Environmental Product Compliance

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

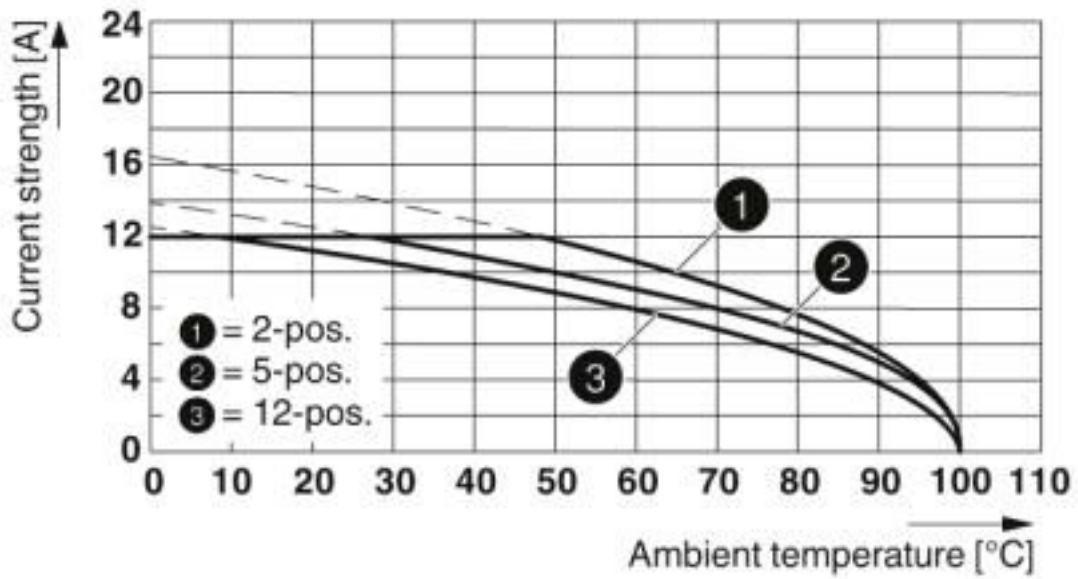
Drawings

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Drilling diagram



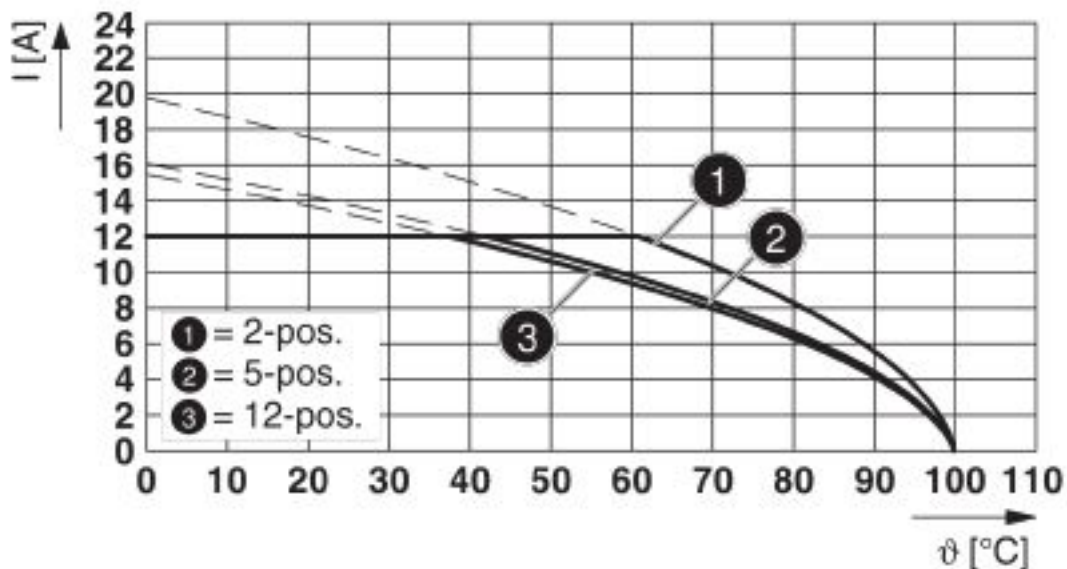
Diagram



Type: GMVSTBR 2,5/...-ST with GMSTBVA 2,5/...-G

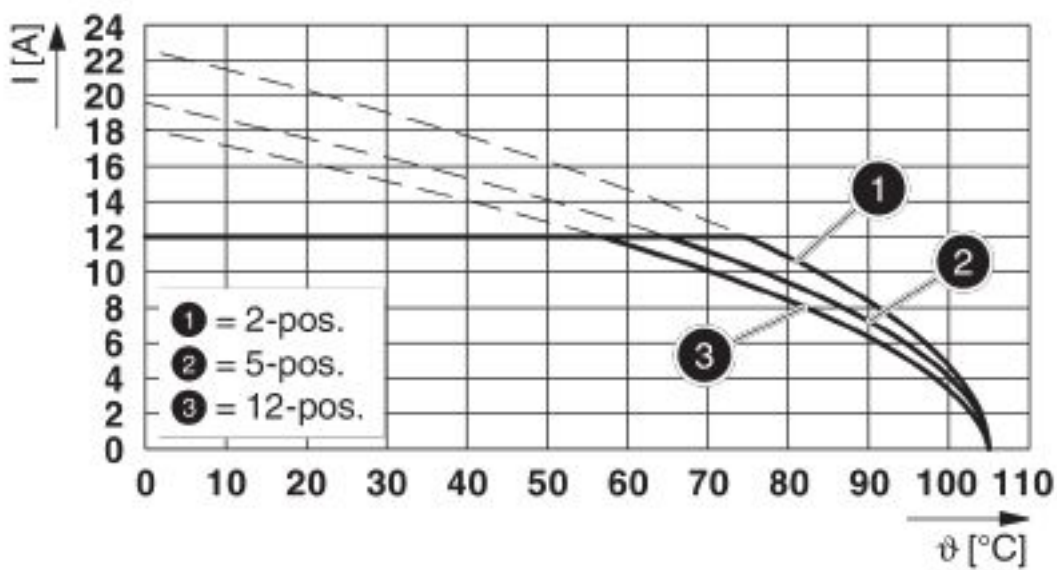
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Diagram



Type: GMSTB 2,5/...-ST with GMSTBVA 2,5/...-G

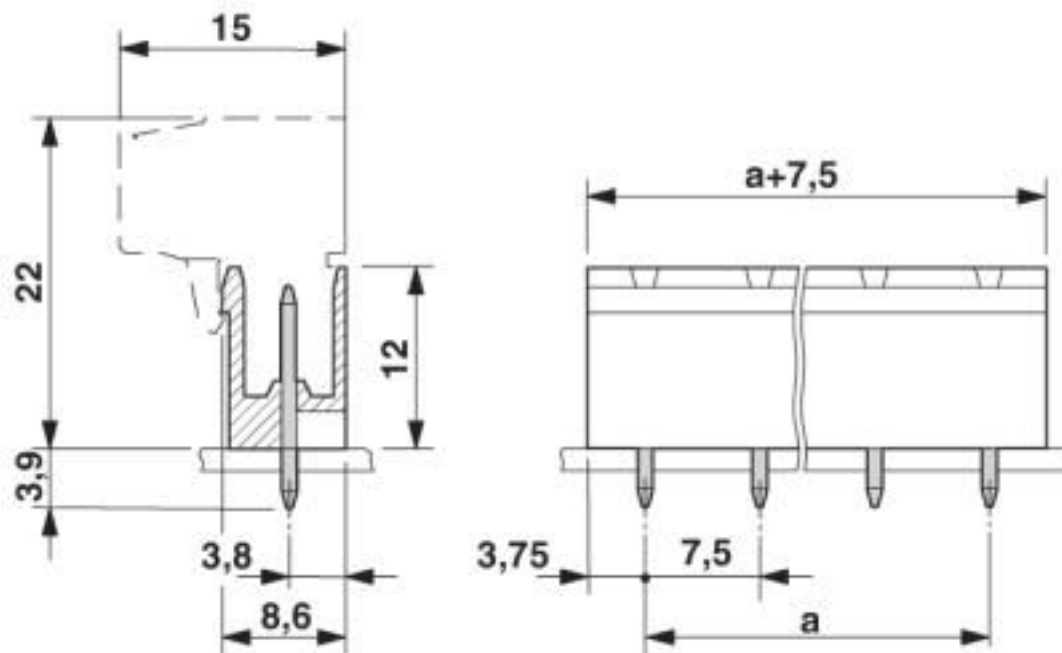
Diagram



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

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Dimensional drawing



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 |

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Classifications

UNSPSC

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

CSA / IECCEB CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

| | | | |
|--------------------|---|---|-------|
| CSA |  | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
| | | B | D |
| Nominal voltage UN | | 300 V | 300 V |
| Nominal current IN | | 10 A | 10 A |

| | | | |
|--------------------|---|---|----------------|
| IECEE CB Scheme |  | http://www.iecee.org/ | DE1-60988-B1B2 |
| Nominal voltage UN | | 400 V | |
| Nominal current IN | | 12 A | |

| | | |
|-----|---|---------|
| EAC |  | B.01687 |
|-----|---|---------|

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Approvals

| | | | |
|--------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19931013 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 15 A | 10 A | |

| | | | |
|------------------------|-------|---|----------|
| VDE Zeichengenehmigung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 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



Filler plug

Accessories - MSTB-BL - 1755477



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

Labeled terminal marker

Marker card - SK 7,5/3,8:FORTL.ZAHLEN - 0804455

Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.5 mm, lettering field size: 7.5 x 3.8 mm



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Accessories

Additional products

Printed-circuit board connector - GMVSTBR 2,5/ 6-ST - 1737741



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm², number of positions: 6, pitch: 7.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - GMVSTBW 2,5/ 6-ST - 1737851



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm², number of positions: 6, pitch: 7.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - GMSTB 2,5/ 6-ST - 1766929



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm², number of positions: 6, pitch: 7.5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - GFKC 2,5/ 6-ST-7,5 - 1939455



PCB connector, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm², number of positions: 6, pitch: 7.5 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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[PVP02-5,00](#) [PVP03-3,50](#) [PVP04-3,50](#) [PVS02-5,00](#) [1-1986160-3](#) [1377680000](#) [1531000000](#) [1546228-5](#) [ELFH16150](#) [ELFP03110](#)
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