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

1766770

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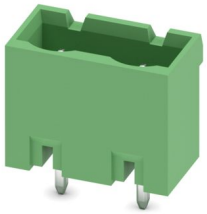


PCB headers, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Pin, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: GMSTBVA 2,5/..-G, pitch: 7.62 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 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
- Vertical connection enables multi-row arrangement on the PCB

Commercial data

Item number	1766770
Packing unit	250 pc
Minimum order quantity	250 pc
Sales key	AA03
Product key	AACSJH
Catalog page	Page 345 (C-1-2013)
GTIN	4017918032791
Weight per piece (including packing)	1.04 g
Weight per piece (excluding packing)	1.025 g
Customs tariff number	85366930
Country of origin	DE

Technical data

Product properties

Product type	PCB headers
Product family	GMSTBVA 2,5/..-G
Product line	COMBICON Connectors M
Type	Standard
Number of positions	2
Pitch	7.62 mm
Number of connections	2
Number of rows	1
Number of potentials	2
Mounting flange	without
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	3.7 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)

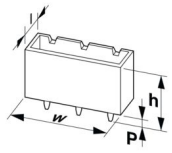
Material data - housing

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]	15.9 mm
Length [l]	8.6 mm
Installed height	12 mm
Solder pin length [P]	3.9 mm
Pin dimensions	1 x 1 mm

PCB design

Hole diameter	1.4 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

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.	8 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)
Acceleration	5g (60.1 Hz ... 150 Hz)
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	3.7 mΩ
Contact resistance R_2	3.8 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

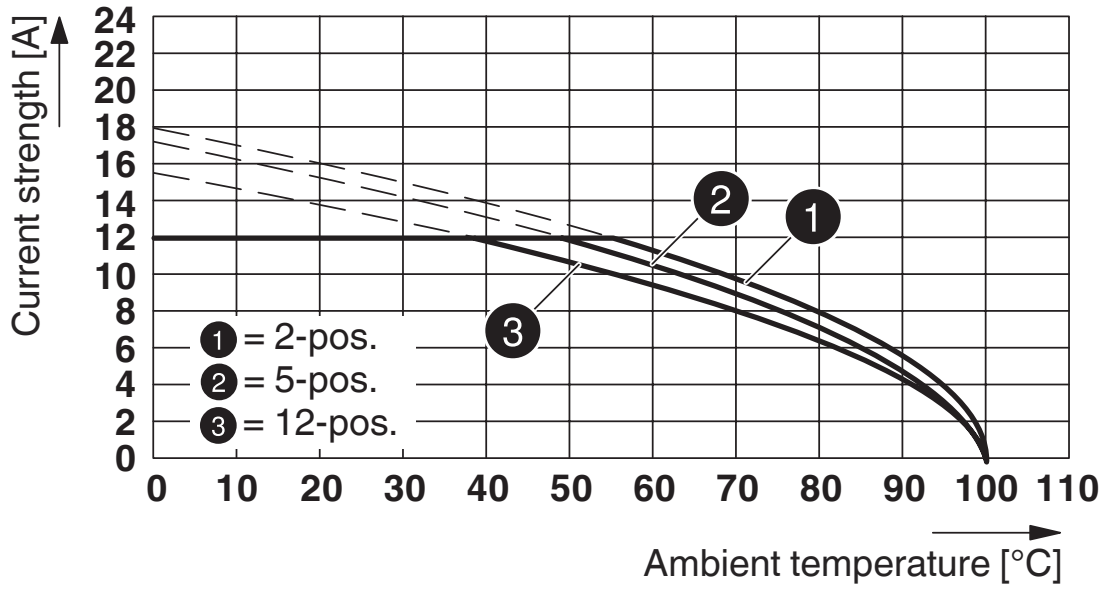
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
Outer packaging type	Carton

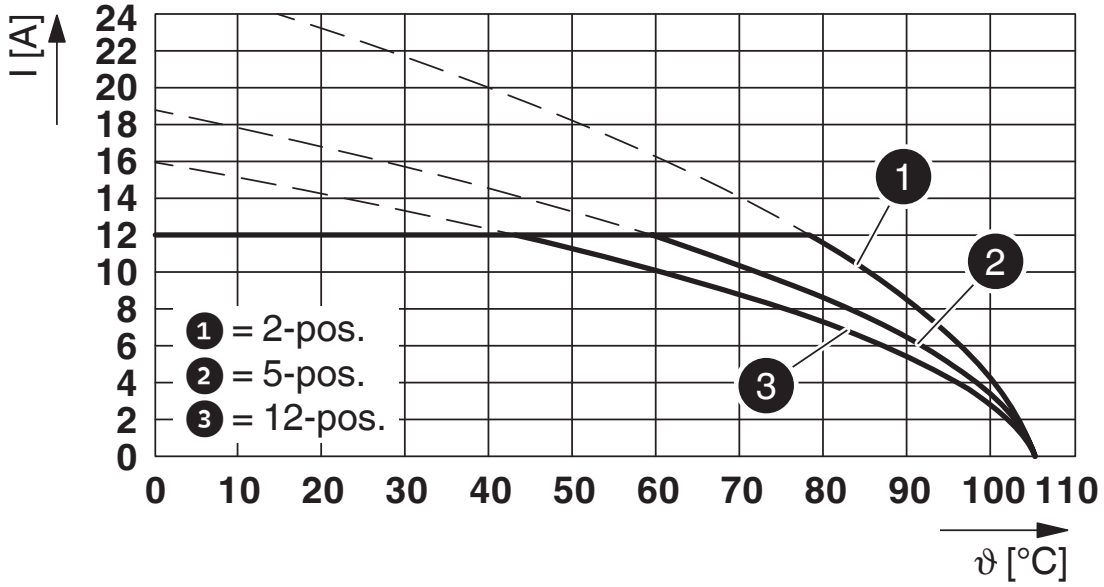
Drawings

Diagram



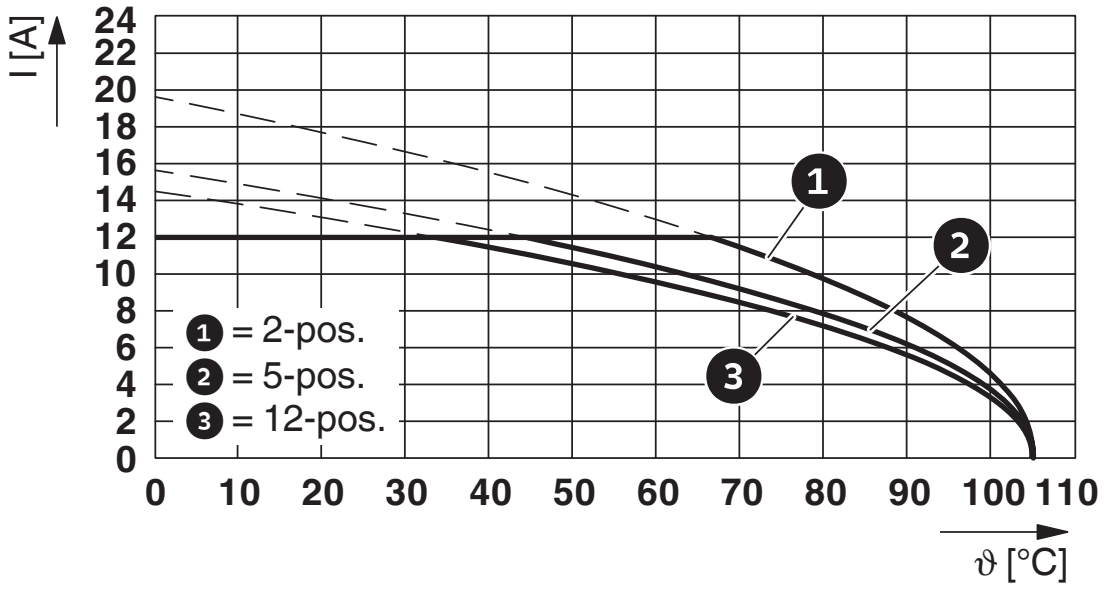
Type: FRONT-GMSTB 2,5/...-ST-7,62 with GMSTBVA 2,5/...-G-7,62

Diagram



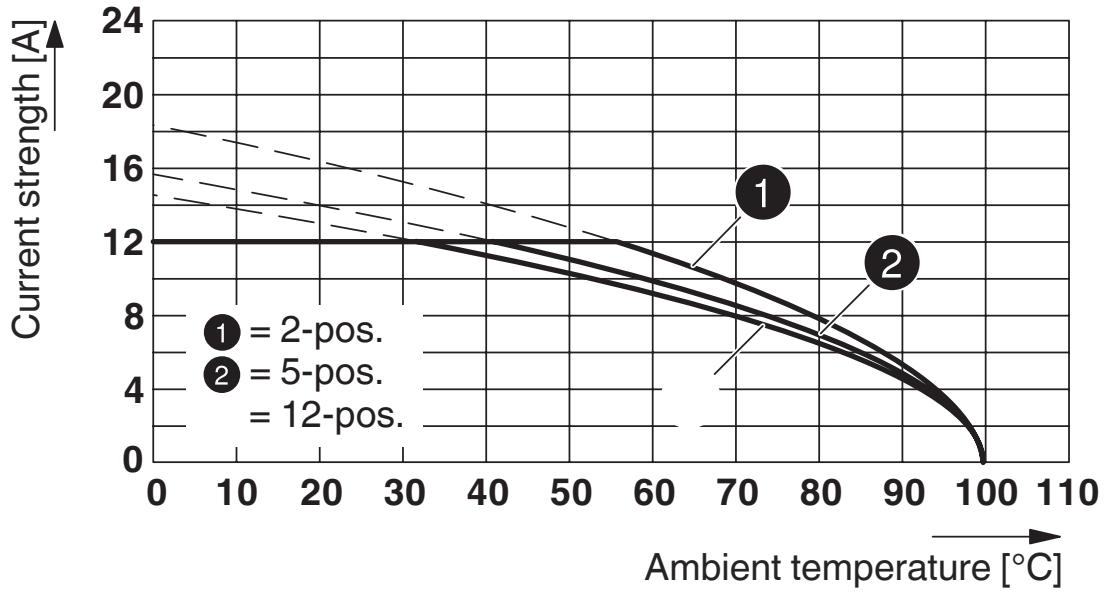
Type: GIC 2,5/...-G-7,62 with GMSTBVA 2,5/...-G-7,62

Diagram



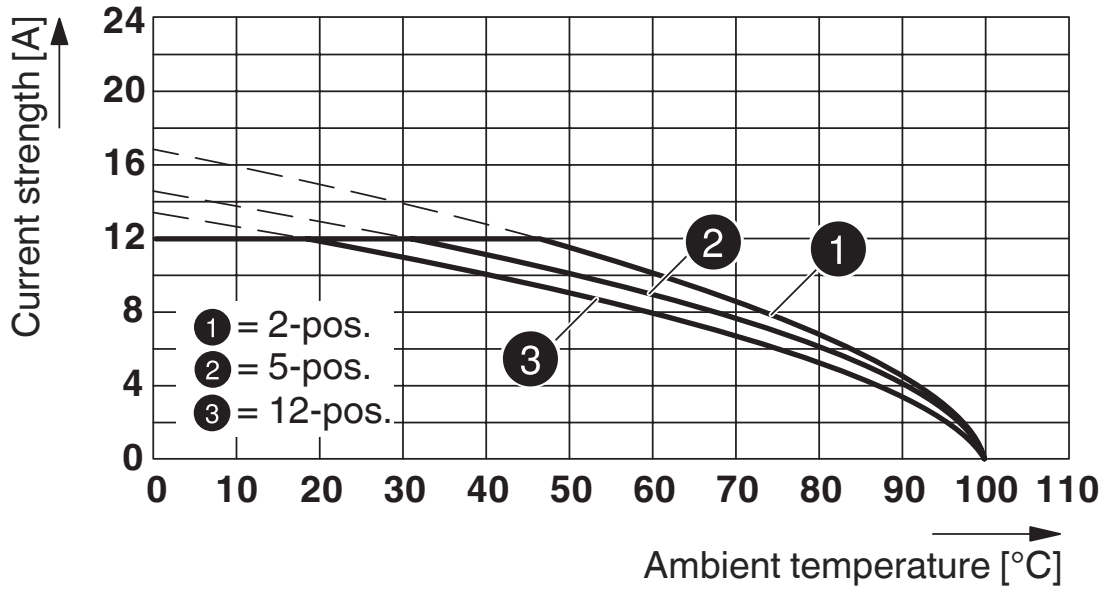
Type: GICV 2,5/...-G-7,62 with GMSTBVA 2,5/...-G-7,62

Diagram



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

Diagram



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

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1766770

CSA
Approval ID: 13631-2585951

	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	-	-

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	-	-

Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002637

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

Accessories

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

0804549

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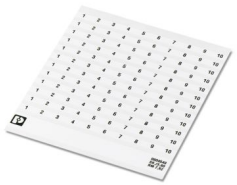

Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: 7.62 x 3.8 mm

MSTB-BL - Accessories

1755477

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



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

CR-MSTB - Coding section

1734401

https://www.phoenixcontact.com/us/products/1734401



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

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

1766990

https://www.phoenixcontact.com/us/products/1766990



PCB connector, nominal cross section: 2.5 mm^2, 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

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

1806119

https://www.phoenixcontact.com/us/products/1806119



PCB connector, nominal cross section: 2.5 mm^2, 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

https://www.phoenixcontact.com/us/products/1832413



PCB connector, nominal cross section: 2.5 mm^2, 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

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

1766770

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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 mm^2, 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

https://www.phoenixcontact.com/us/products/1939633



PCB connector, nominal cross section: 2.5 mm^2, 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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