

# Printed-circuit board connector - GMVSTBW 2,5 HV/ 2-ST-7,62 - 1771910

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


The figure shows an 4-pos. version in green

## Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- ✓ 600 V UL approval in the smallest of dimensions



## Key Commercial Data

Packing unit	50 pc
GTIN	 4 046356 461504
GTIN	4046356461504

## Technical data

### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	POWER COMBICON 2,5
Type of contact	Female connector
Range of articles	GMVSTBW 2,5 HV/...-ST
Pitch	7.62 mm
Number of positions	2
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M3

# Printed-circuit board connector - GMVSTBW 2,5 HV/ 2-ST-7,62 - 1771910

## Technical data

### Item properties

Locking	without
Number of levels	1
Number of connections	2
Number of potentials	2

### Electrical parameters

Nominal current	12 A
Nom. voltage	630 V
Rated voltage	500 V
Rated voltage (III/2)	630 V
Rated voltage (II/2)	1000 V
Rated surge voltage (III/3)	6 kV
Rated surge voltage (III/2)	6 kV
Rated surge voltage (II/2)	6 kV

### Connection capacity

Connection method	Screw connection with tension sleeve
pluggable	Yes
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 12
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Stripping length	7 mm
Torque	0.5 Nm ... 0.6 Nm

### Flange specifications

Type of locking	without
Mounting flange	without

### 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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

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## Technical data

### 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 ]	15 mm
Width [ w ]	13.19 mm
Height [ h ]	27.5 mm
Pitch	7.62 mm
Height (without solder pin)	27.5 mm

### Packaging information

Type of packaging	packed in cardboard
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)

### Termination and connection method

Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	2.5 mm <sup>2</sup> / solid / > 50 N
	2.5 mm <sup>2</sup> / flexible / > 50 N

### Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-2:1985-00
Dimension check	IEC 60512-2:1985-00
Resistance of inscriptions	IEC 60068-2-70:1995-12

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## Technical data

### Mechanical tests according to standard

Insertion and withdrawal force	IEC 60512-7:1993-08
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	8 N
Polarization and coding	IEC 60512-7:1993-08 (Polarization)
Contact holder in insert	IEC 60512-8:1993-01
Test force per pos.	33 N

### 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
Note on connection cross section	With connected conductor 4 mm <sup>2</sup> (solid).

### Current carrying capacity / derating curves

Caption	Type: GMVSTBW 2,5 HV/...-ST-7,62 with GMSTBA 2,5/...-G-7,62
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	8 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

### Durability tests (B)

Specification	IEC 60512-5:1992-08
Contact resistance R <sub>1</sub>	2.5 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	2.5 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 10 TΩ

### Thermal tests (C)

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## Technical data

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	6
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	4.8 kV
Power-frequency withstand voltage	2.21 kV

### Environmental and durability tests (E)

Result, degree of protection, IP code	Finger safety with IP20 test finger
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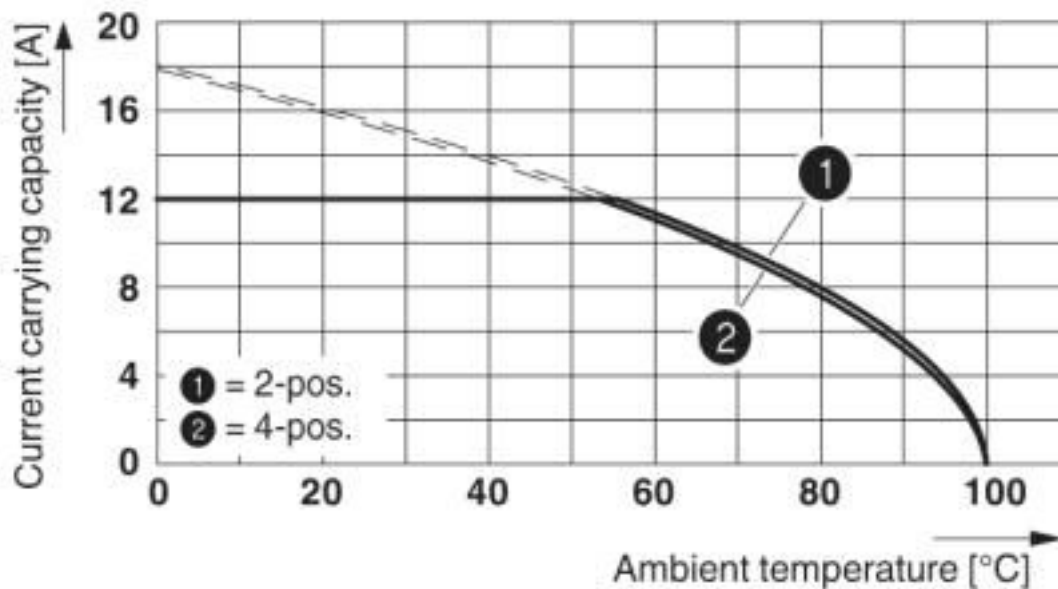
### Environmental Product Compliance

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

# Printed-circuit board connector - GMVSTBW 2,5 HV/ 2-ST-7,62 - 1771910

Diagram



Type: GMVSTB(R/W) 2,5 HV/...-ST-7,62 with GMSTBA 2,5/...-G-7,62

## Classifications

### eCl@ss

eCl@ss 10.0.1	27440309
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	27440309
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002638
ETIM 5.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

### UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409

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## Classifications

### UNSPSC

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

#### Approvals

EAC / cULus Recognized

#### Ex Approvals

### Approval details

EAC		B.01687
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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	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	15 A	15 A	
mm <sup>2</sup> /AWG/kcmil	30-12	30-12	

## Accessories

### Accessories

### Coding element

## Printed-circuit board connector - GMVSTBW 2,5 HV/ 2-ST-7,62 - 1771910

### Accessories

Coding profile - CP-MSTB - 1734634

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



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### 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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### Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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### Additional products

Feed-through header - GMSTBA 2,5/ 2-G-7,62 - 1766233

PCB headers, nominal current: 12 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 2, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm



Feed-through header - GMSTBVA 2,5/ 2-G-7,62 - 1766770

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





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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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