

GMSTBT 2,5 HV/3-ST-7,25 BK - Printed-circuit board connector



2202104

<https://www.phoenixcontact.com/us/products/2202104>

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PCB connector, nominal cross section: 2.5 mm², color: black, nominal current: 16 A, rated voltage (III/2): 1000 V, contact connection type: Socket, number of rows: 1, number of positions: 3, product range: GMSTBT 2,5 HV/...-ST, pitch: 7.25 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, locking: without, mounting: without, type of packaging: packed in cardboard

Your advantages

- Orthogonal plug-in screw connection
- Internationally recognized and proven screw connection

Commercial data

Item number	2202104
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AC08
Product key	ACHADB
GTIN	4046356990141
Weight per piece (including packing)	6.232 g
Weight per piece (excluding packing)	6.232 g
Customs tariff number	85366990
Country of origin	PL

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Technical data

Product properties

Type	Standard
Product type	PCB connector
Product family	GMSTBT 2,5 HV/..-ST
Number of positions	3
Pitch	7.25 mm
Number of rows	1

Electrical properties

Nominal current I_N	16 A
Nominal voltage U_N	1000 V
Degree of pollution	3
Contact resistance	1.3 m Ω
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

Connection data

Connection technology

Nominal cross section	2.5 mm ²
Contact connection type	Socket

Interlock

Locking type	without
Mounting flange	without

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor/PCB connection direction	0 °
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 2.5 mm ²
2 conductors with same cross section, solid	0.2 mm ² ... 1 mm ²
2 conductors with same cross section, flexible	0.2 mm ² ... 1.5 mm ²
2 conductors with same cross section, flexible, with ferrule	0.25 mm ² ... 1 mm ²

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without plastic sleeve	
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 1 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.4 mm / -
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm

Material specifications

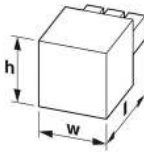
Material data - contact

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 terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

Material data - housing

Color (Housing)	black (9005)
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

Dimensional drawing	
Pitch	7.25 mm
Width [w]	19.95 mm
Height [h]	17.2 mm
Length [l]	20.98 mm

Mounting

Connection method	Screw connection with tension sleeve
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Notes

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Safety note

Safety note	WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.
	• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.
	• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.
	• The item is intended to be an unencapsulated plug for installation in a housing.
	• Operate the connector only when it is fully plugged in.

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	4 mm ² / solid / > 60 N
	2.5 mm ² / flexible / > 50 N

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	3.5 N

Torque test

Specification	IEC 60999-1:1999-11
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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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Visual inspection

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

Dimension check

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

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)
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	1.3 m Ω
Contact resistance R_2	1.5 m Ω
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 10 T Ω

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 ... 105 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 55 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	3

Insulation resistance

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Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 10 TΩ

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)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 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

Packaging specifications

Type of packaging	packed in cardboard
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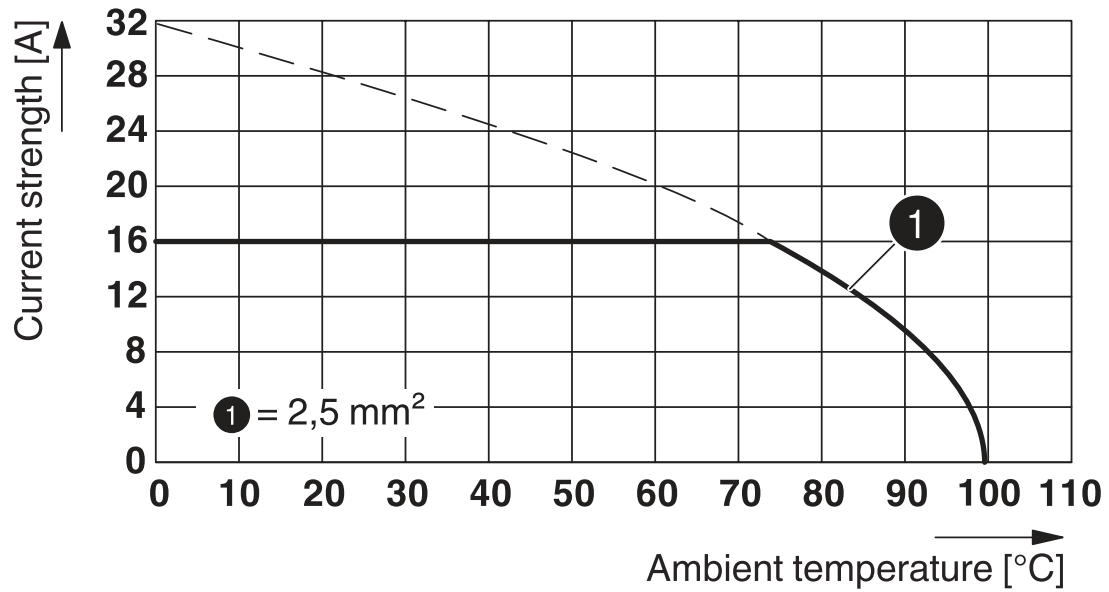


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Drawings

Diagram



Type: GMSTBT 2,5 HV/...-ST-7,25 GY7035 with GMSTBO 2,5 HV/...-GR(L)-7,25 THR

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2202104>



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				
	600 V	16 A	24 - 12	-
Use group C				
	600 V	16 A	24 - 12	-



VDE Gutachten mit Fertigungsüberwachung

Approval ID: 40037875

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	630 V	16 A	-	0.2 - 2.5

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Classifications

ECLASS

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202

ETIM

ETIM 8.0	EC002638
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

China RoHS

Environmentally Friendly Use Period = 50 years

For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

ME-SAS - Shield connection clamp

2853899

<https://www.phoenixcontact.com/us/products/2853899>

Shield connection clamp for terminal points starting from 2.5 mm²



ME-SAS VPE100 - Shield connection clamp

2202146

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Shield connection clamp for terminal points starting from 2.5 mm²



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