

2201085

https://www.phoenixcontact.com/pc/products/2201085

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PCB connector, nominal cross section: 2.5 mm², color: blue, nominal current: 16 A, rated voltage (III/2): 320 V, contact connection type: Socket, number of rows: 1, number of positions: 4, product range: MSTBT 2,5 HC/..-STP, pitch: 5 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5 HC, locking: without, mounting: without

### Your advantages

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

#### Commercial data

Item number	2201085
Packing unit	50 pc
Minimum order quantity	100 pc
Product key	ACHADB
GTIN	4055626247458
Weight per piece (including packing)	6.552 g
Weight per piece (excluding packing)	6.552 g
Customs tariff number	85366990
Country of origin	DE



2201085

https://www.phoenixcontact.com/pc/products/2201085

### Technical data

### Product properties

Туре	Standard
Product line	COMBICON Connectors M
Product type	PCB connector
Product family	MSTBT 2,5 HC/STP
Number of positions	4
Pitch	5 mm
Number of rows	1
Mounting flange	without

### Electrical properties

Nominal current I <sub>N</sub>	16 A
Nominal voltage U <sub>N</sub>	250 V
Degree of pollution	3
Contact resistance	1.2 mΩ
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

### Connection data

#### Connection technology

Туре	Standard
Connector system	COMBICON MSTB 2,5 HC
Nominal cross section	2.5 mm²
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 mm² 2.5 mm²
Conductor cross section flexible	0.2 mm² 2.5 mm²
Conductor cross section AWG	24 12
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² 2.5 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² 2.5 mm²



2201085

https://www.phoenixcontact.com/pc/products/2201085

2 conductors with same cross section, solid	0.2 mm² 1 mm²
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 mm² 1 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> 1.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.4 mm
Stripping length	7 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	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)

#### Material data - housing

Color (Housing)	blue (5015)
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	h
Pitch	5 mm
Width [w]	20 mm
Height [h]	15 mm
Length [I]	18.1 mm

#### 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.



2201085

https://www.phoenixcontact.com/pc/products/2201085

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.
	<ul> <li>WARNING: Commission properly functioning products only.</li> <li>The products must be regularly inspected for damage.</li> <li>Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li> </ul>
	<ul> <li>WARNING: Only electrically qualified personnel may install an 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.</li> </ul>
	<ul> <li>The item is intended to be an unencapsulated plug for installation in a housing.</li> </ul>
	Operate the connector only when it is fully plugged in.
echanical 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	0.2 mm² / solid / > 10 N
setpoint/actual value	0.2 mm² / flexible / > 10 N
	2.5 mm² / solid / > 50 N
	2.5 mm² / flexible / > 50 N
nsertion and withdrawal forces	
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	11 N
Withdraw strength per pos. approx.	7 N
orque test	
Specification	IEC 60999-1:1999-11
Resistance of inscriptions	
Specification	IEC 60068-2-70:1995-12
Result	Test passed
Polarization and coding	
-bianzation and coding	
Specification	IEC 60512-13-5:2006-02



2201085

https://www.phoenixcontact.com/pc/products/2201085

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

### 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	4.8 kV
Contact resistance R <sub>1</sub>	1.2 mΩ
Contact resistance R <sub>2</sub>	1.23 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 21 TΩ

#### Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	$1.0~\mathrm{dm^3~SO_2}$ on $300~\mathrm{dm^3/40~^\circ C/3}$ cycles
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	3.1 kV

#### Ambient conditions

Ambient temperature (operation)	-40 °C 105 °C (dependent on the 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	4	
Insulation resistance		
Specification	IEC 60512-3-1:2002-02	

> 21 TΩ

Air clearances and creepage distances |

Insulation resistance, neighboring positions



2201085

https://www.phoenixcontact.com/pc/products/2201085

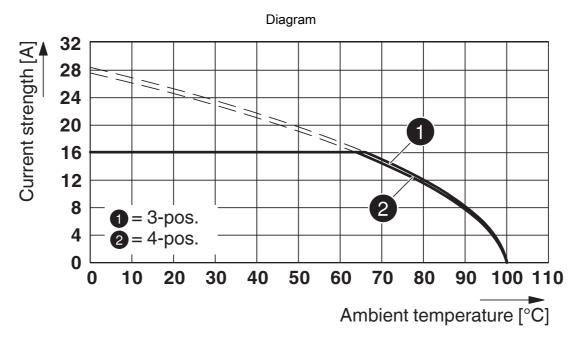
Specification	IEC 60664-1:2007-04
Insulating material group	I I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.2 mm
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm



2201085

https://www.phoenixcontact.com/pc/products/2201085

## Drawings



Type: MSTBT 2,5 HC/...-STF with ICC20(25)-H/...L(R)5,0-...



2201085

https://www.phoenixcontact.com/pc/products/2201085

### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/2201085

e <b>911</b> us	cULus Recognized Approval ID: E60425-19931012				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
Use grou	ір В				
		300 V	16 A	30 - 12	-



2201085

https://www.phoenixcontact.com/pc/products/2201085

## Classifications

UNSPSC 21.0

### **ECLASS**

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202
ETIM	
ETIM 8.0	EC002638
UNSPSC	

39121400



2201085

https://www.phoenixcontact.com/pc/products/2201085

## 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"	



2201085

https://www.phoenixcontact.com/pc/products/2201085

#### Accessories

ME-SAS - Shield connection clamp

2853899

https://www.phoenixcontact.com/pc/products/2853899





Phoenix Contact 2024 © - all rights reserved https://www.phoenixcontact.com

PHOENIX CONTACT GmbH & Co. KG Flachsmarktstraße 8 D-32825 Blomberg +49 (0) 5235-3 00 info@phoenixcontact.com