

1089926

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PCB connector, nominal cross section: 2.5 mm², color: blue, nominal current: 16 A, rated voltage (III/2): 320 V, contact surface: Tin, 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, type of packaging: packed in cardboard

Your advantages

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

Commercial data

Item number	1089926
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AC08
Product key	ACHADB
GTIN	4055626894775
	100020001110
Weight per piece (including packing)	6.618 g
Weight per piece (including packing) Weight per piece (excluding packing)	
	6.618 g



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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 _N	16 A
Nominal voltage U _N	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



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Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² 2.5 mm ²
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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 without plastic sleeve	0.25 mm² 1 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² 1.5 mm²
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



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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.
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	
Pull-out test Specification	IEC 60999-1:1999-11
Specification Conductor cross section/conductor type/tractive force	IEC 60999-1:1999-11 0.2 mm² / solid / > 10 N
Specification	
Specification Conductor cross section/conductor type/tractive force	0.2 mm² / solid / > 10 N
Specification Conductor cross section/conductor type/tractive force	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N
Specification Conductor cross section/conductor type/tractive force	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces Result	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces Result No. of cycles	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N Test passed 25
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces Result No. of cycles Insertion strength per pos. approx. Withdraw strength per pos. approx.	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N Test passed 25 11 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces Result No. of cycles Insertion strength per pos. approx. Withdraw strength per pos. approx.	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N Test passed 25 11 N 7 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces Result No. of cycles Insertion strength per pos. approx. Withdraw strength per pos. approx.	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N Test passed 25 11 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces Result No. of cycles Insertion strength per pos. approx. Withdraw strength per pos. approx. Torque test Specification Resistance of inscriptions	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N Test passed 25 11 N 7 N
Specification Conductor cross section/conductor type/tractive force setpoint/actual value Insertion and withdrawal forces Result No. of cycles Insertion strength per pos. approx. Withdraw strength per pos. approx. Torque test Specification	0.2 mm² / solid / > 10 N 0.2 mm² / flexible / > 10 N 2.5 mm² / solid / > 50 N 2.5 mm² / flexible / > 50 N Test passed 25 11 N 7 N



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Specification	IEC 60512-13-5:2006-02
Result	Test passed
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	4.8 kV
Contact resistance R ₁	1.2 mΩ
Contact resistance R ₂	1.23 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 21 TΩ

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	1.0 dm ³ SO ₂ on 300 dm ³ /40 °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

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Specification	IEC 60512-5-1:2002-02	
Tested number of positions	4	



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Inculation registance

Insulation resistance				
Specification	IEC 60512-3-1:2002-02			
Insulation resistance, neighboring positions	> 21 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)	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			

Packaging specifications

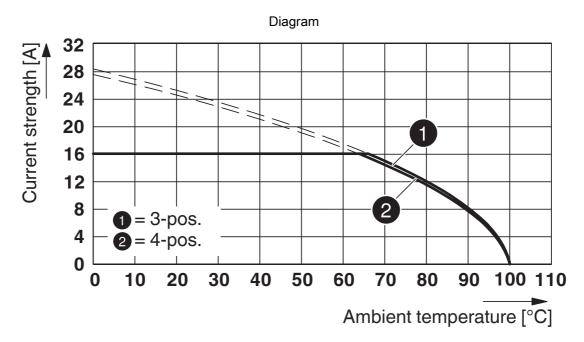
Type of packaging	packed in cardboard
77 7 3	



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Drawings



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



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1089926

e 911 us	cULus Recognized Approval ID: E60425-19931012				
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
Use group B					
		300 V	16 A	30 - 12	-



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Classifications

ECLASS

	ECLASS-11.0	27460202		
	ECLASS-12.0	27460202		
	ECLASS-13.0	27460202		
ETIM				
	ETIM 8.0	EC002638		
UNSPSC				
	UNSPSC 21.0	39121400		

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