XPC 2,5/12-STF-5,08 - PCB connector

1491534

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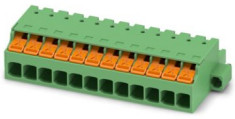


PCB connector, nominal cross section: 2.5 mm^2, color: green, nominal current: 16 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of rows: 1, number of positions: 12, product range: XPC 2,5/..-STF, pitch: 5.08 mm, connection method: Push-X-connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking mechanism, mounting method: Screw flange, type of packaging: packed in cardboard

Your advantages

- Highly convenient operation thanks to direct, effortless, and tool-free conductor connection
- Quick connection of all conductor types with and even without ferrules
- Reliable wiring thanks to acoustic and visual feedback
- Quick conductor release by simply pressing the orange release button
- Screwable flange for superior mechanical stability
- Plug-in compatibility with existing headers of the COMBICON portfolio
- Quick and convenient testing using integrated test option

Push-X Technology
Designed by Phoenix Contact

Commercial data

Item number	1491534
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)

Sales key	AACGAB
Product key	AACGAB
GTIN	4063151938543
Weight per piece (including packing)	27.68 g
Weight per piece (excluding packing)	2.22 g
Customs tariff number	85366990
Country of origin	CN

Technical data

Product properties

Product type	PCB connector
Product family	XPC 2,5/..-STF
Product line	COMBICON Connectors M
Number of positions	12
Pitch	5.08 mm
Number of rows	1

Electrical properties

Properties

Nominal current I_N	16 A
Nominal voltage U_N	320 V
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)	500 V
Rated surge voltage (II/2)	4 kV

Connection data

Connection technology

Connector system	COMBICON MSTB 2,5
Nominal cross section	2.5 mm²
Contact connection type	Socket

Interlock

Locking type	Screw locking mechanism
Mounting type	Screw flange
Tightening torque	0.3 Nm

Conductor connection

Connection method	Push-X-connection
Conductor/PCB connection direction	0 °
Conductor cross-section rigid	0.5 mm² ... 2.5 mm²
Conductor cross-section flexible	0.5 mm² ... 2.5 mm²
Conductor cross-section AWG	20 ... 12
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.5 mm² ... 2.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.5 mm² ... 2.5 mm²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / -
Stripping length	10 mm

Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
	1213144 CRIMPFOX CENTRUS 6S
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.5 mm²; Length: 10 mm
	Cross section: 0.75 mm²; Length: 10 mm
	Cross section: 1 mm²; Length: 10 mm
	Cross section: 1.5 mm²; Length: 10 mm
	Cross section: 2.5 mm²; Length: 10 mm

Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
	1213144 CRIMPFOX CENTRUS 6S
ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.5 mm²; Length: 10 mm
	Cross section: 0.75 mm²; Length: 10 mm
	Cross section: 1 mm²; Length: 10 mm
	Cross section: 1.5 mm²; Length: 10 mm
	Cross section: 2.5 mm²; Length: 10 mm

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

Material data - housing

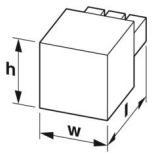
Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	II
CTI according to IEC 60112	575
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	200 °C

Material data – actuating element

Color (Actuating element)	orange (2003)
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	175 °C

Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	71.07 mm
Height [h]	14.8 mm
Length [l]	30.86 mm

Mounting

Flange

Tightening torque	0.3 Nm

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.

Mechanical tests

Conductor connection

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

Test for conductor damage and slackening

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

Repeated connection and disconnection

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	0.5 mm² / solid / > 20 N
	0.5 mm² / flexible / > 20 N
	2.5 mm² / solid / > 50 N
	2.5 mm² / flexible / > 50 N

Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	9 N
Withdraw strength per pos. approx.	8 N

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

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

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	1.2 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	EN ISO 22479:2022-06
Corrosive stress	0.2 dm^3 SO_2 on 300 dm^3/40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	2.21 kV

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
Test directions	X-, Y- and Z-axis

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

Railway application: Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2022-06
	IEC 61373:2010-05
Spectrum	Long life test category 1, class B, body mounted
Frequency	f_1 = 5 Hz to f_2 = 150 Hz
ASD level	0.964 $(m/s^2)^2/Hz$
Acceleration	0.572 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Contact interruption	< 1 µs
Result	Test passed

Railway application: Shocks

Specification	DIN EN 50155 (VDE 0115-200):2022-06
	IEC 61373:2010-05
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Contact interruption	< 1 µs
Result	Test passed

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	16

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

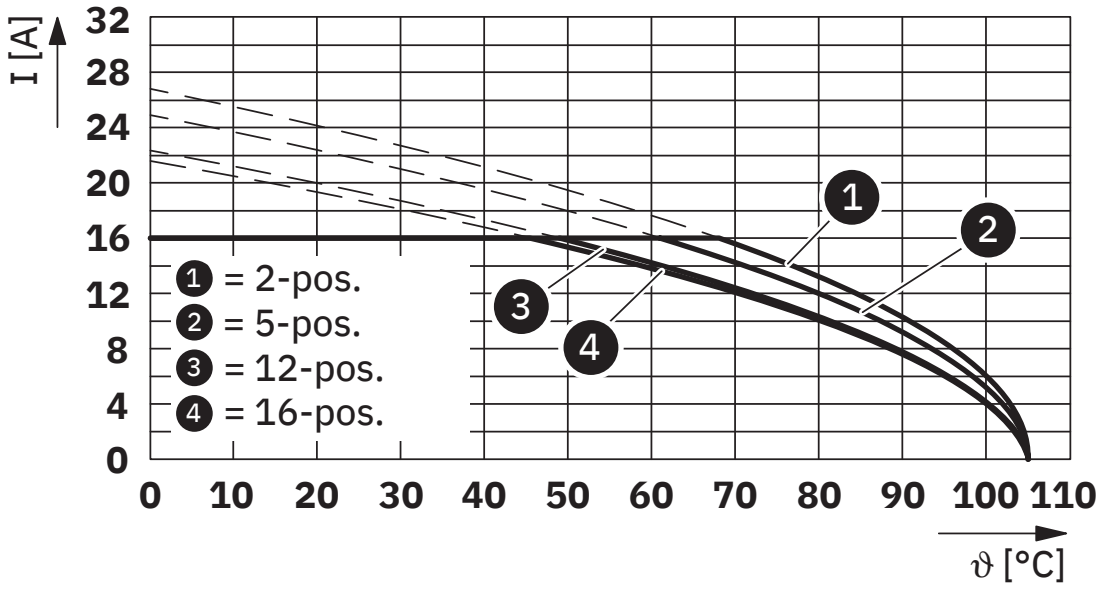
Specification	IEC 60664-1:2020-05
Insulating material group	II
Comparative tracking index (IEC 60112)	CTI 575
Rated insulation voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.6 mm
Rated insulation voltage (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)	3 mm
Rated insulation voltage (II/2)	500 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.6 mm

Packaging specifications

Type of packaging	packed in cardboard

Drawings

Diagram



Type: XPC 2,5/...-STF-5,08 with CC 2,5/...-GF-5,08-LR P...THR

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1491534

cULus Recognized
Approval ID: E60425-20230810

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	16 A	20 - 12	-
D				
	300 V	10 A	20 - 12	-

VDE Zeichengenehmigung
Approval ID: 40053722

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	320 V	16 A	-	0.5 - 2.5

UL Recognized
Approval ID: E60425-20230810

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
F				
	250 V	16 A	20 - 12	-

Classifications

ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

ETIM

ETIM 10.0	EC002638

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%

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