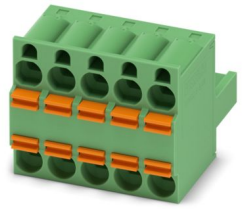
TFKC 2,5/ 5-ST-5,08 AU - PCB connector

1965461

https://www.phoenixcontact.com/us/products/1965461

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PCB TWIN plug, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Au, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 10, product range: TFKC 2,5/..-ST, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting method: without, type of packaging: packed in cardboard

Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- Time saving push-in connection, tools not required
- Potentials can be easily looped through – ideal for BUS applications
- Intuitive operation due to color-coded actuating push button
- Can be combined with the MSTB 2,5 range
- Quick and convenient testing using integrated test option

Commercial data

Item number	1965461
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA03
Product key	AACFMA
GTIN	4017918912734
Weight per piece (including packing)	11.36 g
Weight per piece (excluding packing)	11.36 g
Customs tariff number	85366990
Country of origin	BG

Technical data

Product properties

Product type	PCB TWIN plug
Product family	TFKC 2,5/..-ST
Product line	COMBICON Connectors M
Type	Components DeviceNet compatible
Number of positions	5
Pitch	5.08 mm
Number of connections	10
Number of rows	1
Number of potentials	5
Mounting type	without

Fitting of components

Partial assembly	No

Electrical properties

Properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Contact resistance	1.1 mΩ
Rated voltage (III/3)	320 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

Conductor connection I2 / I3

Current carrying capacity	24 A

Plug-in contact I1

Current carrying capacity	12 A

Connection data

Connection technology

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

Interlock

Locking type	without

Mounting type	without

Conductor connection

Connection method	Push-in spring connection
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
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 / 2.0 mm
Stripping length	10 mm

Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6

Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6

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	Completely gold-plated
Metal surface terminal point (top layer)	Gold (0.8 µm - 1.4 µm Au)
Metal surface terminal point (middle layer)	Nickel (2 µm - 3 µm Ni)
Metal surface contact area (top layer)	Gold (0.8 µm - 1.4 µm Au)
Metal surface contact area (middle layer)	Nickel (2 µm - 3 µm Ni)

Material data - housing

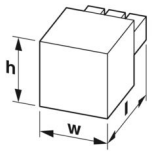
Color (Housing)	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

Material data – actuating element

Color (Actuating element)	orange (2003)

Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	275
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	25.3 mm
Height [h]	22.1 mm
Length [l]	25.7 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.

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	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	2.5 mm² / solid / > 50 N
	2.5 mm² / flexible / > 50 N

Insertion and withdrawal forces

Specification	IEC 60512-7:1993-08
Result	Test passed
No. of cycles	100

Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	5 N

Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

Polarization and coding

Specification	IEC 60512-7:1993-08 (Polarization)
Result	Test passed

Visual inspection

Specification	IEC 60512-2:1985-00
Result	Test passed

Dimension check

Specification	IEC 60512-2:1985-00
Result	Test passed

Environmental and real-life conditions

Durability test

Specification	IEC 60512-5:1992-08
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	1.1 mΩ
Contact resistance R_2	1.3 mΩ
Insertion/withdrawal cycles	100

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	2.21 kV

Vibration test

Specification	IEC 60068-2-6:1995-03
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

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 ... 100 °C (dependent on the derating curve)

Ambient conditions

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

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-3:1976-01
Tested number of positions	10

Insulation resistance

Specification	IEC 60512-2:1985-00
Insulation resistance, neighboring positions	$10^{12}\ \Omega$

Temperature cycles

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

Air clearances and creepage distances |

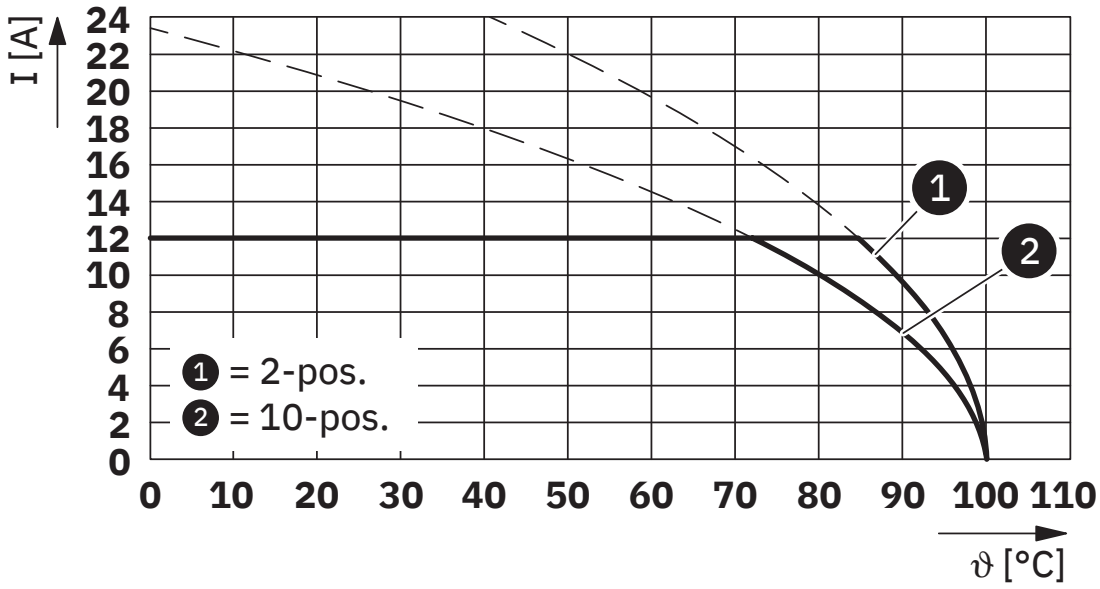
Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	4 mm
Rated insulation voltage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

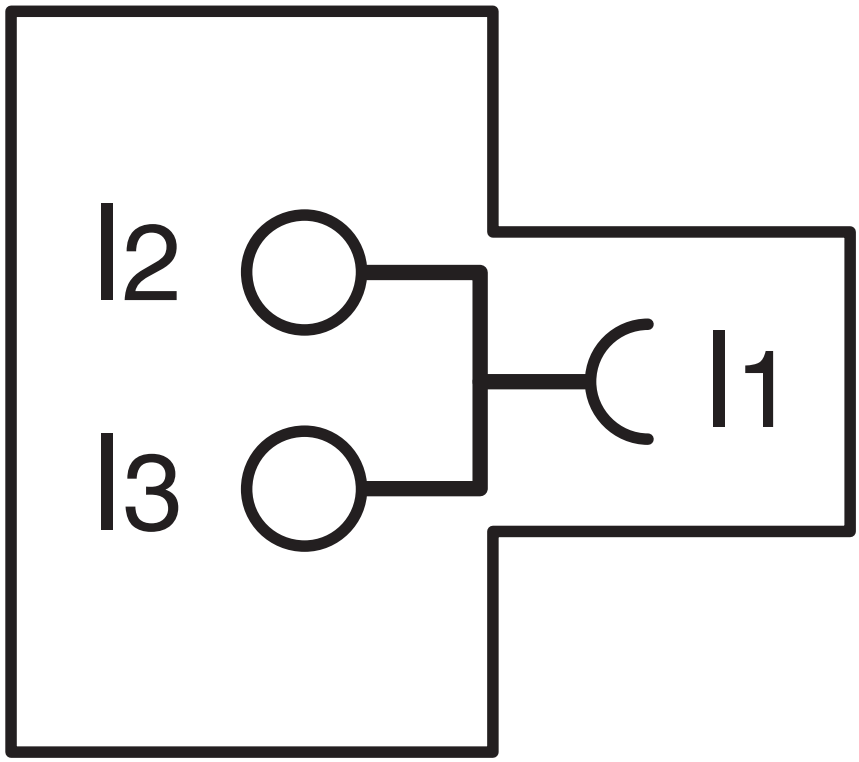
Drawings

Diagram



Type: TFKC 2,5/...-ST-5,08 AU with MSTBA 2,5/...-G-5,08 AU

Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1965461

cULus Recognized
Approval ID: E60425-19931011

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	10 A	26 - 12	-
D				
	300 V	10 A	26 - 12	-

VDE approval of drawings
Approval ID: 40050694

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	250 V	12 A	-	0.2 - 2.5

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%

EF3.1 Climate Change

CO2e kg	0.415 kg CO2e

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