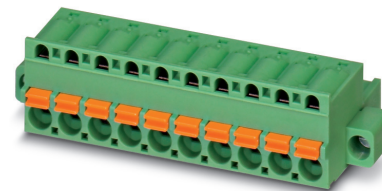


# Data sheet

Order No.: 1873207

Type: FKC 2,5/ 2-STF-5,08

PCB connector, Push-in spring connection



The figure shows a 10-position version of the product

## 1 Main features



- |                           |                           |                        |                     |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos.             | 2                         | • Nominal current      | 12 A                |
| • Conductor cross section | 2.5 mm <sup>2</sup>       | • Nominal voltage      | 320 V               |
| • Color                   | green (6021)              | • Connection direction | 0 °                 |
| • Pitch                   | 5.08 mm                   | • Type of packaging    | packed in cardboard |
| • Connection method       | Push-in spring connection |                        |                     |

## 2 Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Intuitive use through colour coded actuation lever
- ✓ Quick and convenient testing using integrated test option
- ✓ Screwable flange for superior mechanical stability
- ✓ Can be combined with the MSTB 2,5 range



Make sure you always use the latest documentation.

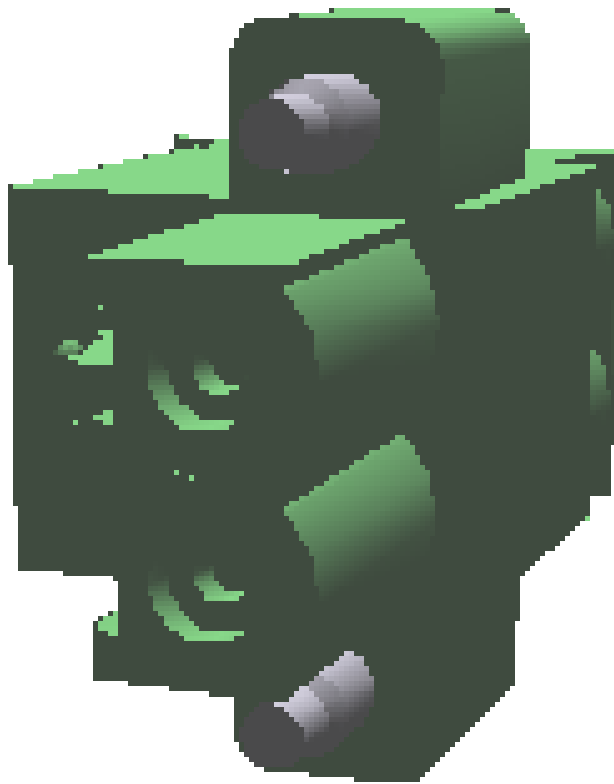
It can be downloaded at: [phoenixcontact.net/product/1873207](https://phoenixcontact.net/product/1873207)

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1873207 FKC 2,5/ 2-STF-5,08

4 3D model in PDF can be activated (Acrobat Reader only)



**1873207 FKC 2,5/ 2-STF-5,08****5 General Technical Data****5.1 item properties**

Order No.	1873207
Type	FKC 2,5/ 2-STF-5,08
Connector system	CLASSIC COMBICON
Product type	PCB connector
Type of contact	Female connector
Range of articles	FKC 2,5/..-STF
Pitch	5.08 mm
Number of positions	2
Number of levels	1
Number of connections	2
Number of potentials	2
Connection method	Push-in spring connection
Connection direction of the conductor to plug-in direction	0 °

**1873207 FKC 2,5/ 2-STF-5,08****6 Mounting****6.1 Flange mounting**

Type of locking	Screw locking
Mounting flange	Screw flange
Torque	0.3 Nm

**1873207 FKC 2,5/ 2-STF-5,08****7 Conductor connection****7.1 Connection capacity**

Nominal cross section	2.5 mm <sup>2</sup>
Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with the same cross section flexible with TWIN ferrule and 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 / 2.0 mm
Stripping length	10 mm

**7.2 Connection capacity AWG**

Conductor cross section AWG	24 ... 12
-----------------------------	-----------

**1873207 FKC 2,5/ 2-STF-5,08****8 Material properties****8.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Terminal point surface	Tin (4 - 8 µm Sn)
Surface contact area	Tin (4 - 8 µm Sn)
Surface characteristics	hot-dip tin-plated

**8.2 Material of plastic parts**

	Housing	Actuation element
Color	green (6021)	orange (2003)
Insulating material	PA	PBT
Insulating material group	I	I
CTI according to IEC 60112	600	600
Flammability rating according to UL 94	V0	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	

**1873207 FKC 2,5/ 2-STF-5,08****9 Dimensions****9.1 Dimensions for the product**

Length		25.73 mm
Width		20.26 mm
Installed height		15 mm
Total height		15 mm



1873207 FKC 2,5/ 2-STF-5,08

10 Series drawing

pos.	dim. a	dim. w
2	5.08 ±0.10	20.26 ±0.20
3	10.16 ±0.15	25.34 ±0.20
4	15.24 ±0.15	30.42 ±0.20
5	20.32 ±0.20	35.50 ±0.20
6	25.40 ±0.20	40.58 ±0.20
7	30.48 ±0.20	45.66 ±0.20
8	35.56 ±0.20	50.74 ±0.25
9	40.64 ±0.20	55.82 ±0.25
10	45.72 ±0.20	60.90 ±0.25
11	50.80 ±0.25	65.98 ±0.25
12	55.88 ±0.25	71.06 ±0.25
13	60.96 ±0.25	76.14 ±0.25
14	66.04 ±0.25	81.22 ±0.40
15	71.12 ±0.25	86.30 ±0.40
16	76.20 ±0.25	91.38 ±0.40
17	81.28 ±0.40	96.46 ±0.40
18	86.36 ±0.40	101.54 ±0.40
19	91.44 ±0.40	106.62 ±0.40
20	96.52 ±0.40	111.70 ±0.40
21	101.60 ±0.40	116.78 ±0.40
22	106.68 ±0.40	121.86 ±0.50
23	111.76 ±0.40	126.94 ±0.50
24	116.84 ±0.40	132.02 ±0.50

position 1

2.65 ±0.01  
4.88 ±0.01  
5.08 ±0.01  
a  
w

15 ±0.15  
16.9  
25.23

5.39 ±0.1  
1.6 ±0.1

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	TECDOC 2D_Productfamily			- EN ISO 291 2950
	description			
				FKC 2,5/ 2-STF-5,08
page 1	of 1			6

**1873207 FKC 2,5/ 2-STF-5,08****11 Product notes****11.1 General information**

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.
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.

**12 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	100

**13 Application**

<b>Ferrules without insulating collar, according to DIN 46228-1</b>	
Recommended crimping pliers	1212034 CRIMPFOX 6
Ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.5 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 0.75 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 1 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 1.5 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 2.5 mm <sup>2</sup> ; Length: 10 mm
<b>Ferrules with insulating collar, according to DIN 46228-4</b>	
Recommended crimping pliers	1212034 CRIMPFOX 6
Ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.5 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 0.75 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 1 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 1.5 mm <sup>2</sup> ; Length: 8 mm ... 10 mm Cross section: 2.5 mm <sup>2</sup> ; Length: 10 mm

**13.1 Temperature limit values**

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

**1873207 FKC 2,5/ 2-STF-5,08****14 General tests****14.1 Specification**

Specification	IEC 61984
Specification	IEC 60999-1
Brief description	Printed-circuit board connector

**15 Mechanical tests****15.1 Check for damage to conductor or loosening**

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

**15.2 Pull-out test**

Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm <sup>2</sup> / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm <sup>2</sup> / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm <sup>2</sup> / solid / > 50 N
Conductor cross section/conductor type/tractive force actual value	2.5 mm <sup>2</sup> / flexible / > 50 N

**15.3 Repeated connection and disconnection**

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

**15.4 Conductor connection**

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

**15.5 Torque test**

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

**15.6 Visual examination**

Specification	IEC 61984:2008-10
Visual examination	Test passed
Specification	IEC 60512-1-1:2002-02

**15.7 Dimensional test**

**1873207 FKC 2,5/ 2-STF-5,08**



Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02

**15.8 Resistance of marking**



Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12

**15.9 Polarization and coding**



Polarization when inserted Requirement >20 N	Test passed
Specification	IEC 60512-13-5:2006-02

**1873207 FKC 2,5/ 2-STF-5,08****16 Insertion and withdrawal forces**

Insertion and withdrawal force	
Specification	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

**1873207 FKC 2,5/ 2-STF-5,08****17 Electrical tests**

Rated current / conductor cross section	12 A / 2.5 mm <sup>2</sup>
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Contact resistance	1.5 mΩ
Degree of pollution	2

**17.1 Air and creepage distances**

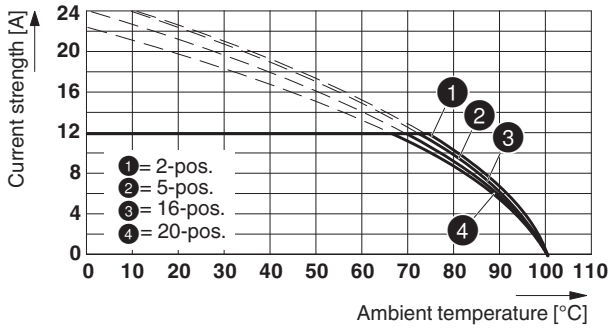
Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group			
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	320 V	320 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	3 mm	3 mm	3 mm
Minimum value of the creepage path requirement in acc. with table	4 mm	3 mm	3.2 mm

1873207 FKC 2,5/ 2-STF-5,08

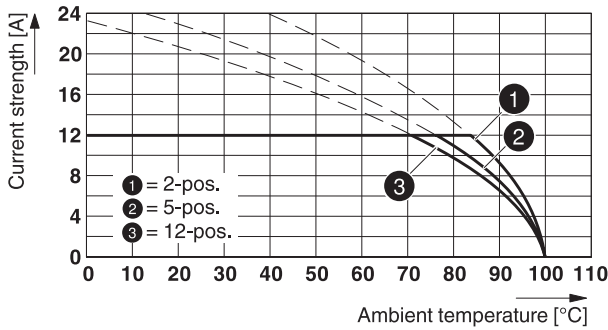
18 Current carrying capacity/derating curves

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Note	For number of positions, see diagram
Reduction factor	0.8
Conductor cross section	2.5 mm <sup>2</sup>

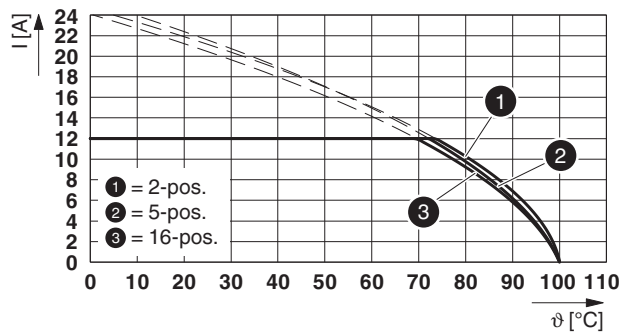
Type: FKC 2,5/...-STF-5,08 with IC 2,5/...-STGF-5,08



Type: FKC 2,5/...-STF-5,08 with CC 2,5/...-GSF-5,08 P26THR

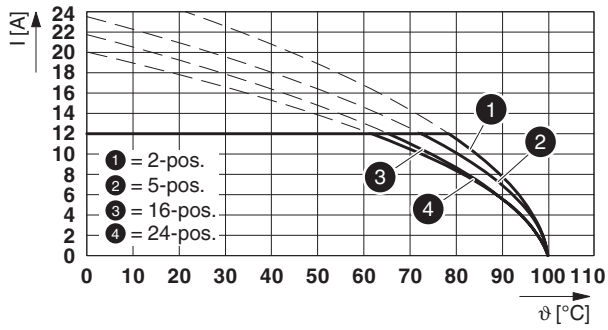


Type: FKC 2,5/...-STF-5,08 with DFK-MSTB 2,5/...-STF-5,08-LR



# 1873207 FKC 2,5/ 2-STF-5,08

Type: FKC 2.5/...-STF-5,08 with MSTB 2,5/...-GF-5,08





**1873207 FKC 2,5/ 2-STF-5,08****19 Environmental and durability tests****19.1 Vibration test**

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Note	The connected conductor loops were guided to the test sample at a distance of approx. 10 cm.

**19.2 Insulation resistance**


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

**1873207 FKC 2,5/ 2-STF-5,08****20 Type approval and special tests****21 Classification for connectors**

Specification	IEC 61984:2008-10
Main features	Connectors without switching capacity (COC)
Construction form	Fixed connectors
Strain relief elements	without strain relief
Connection method	Can be reconnected
Protection against electric shock	Not encapsulated - touch-proof when inserted
Protective conductor	without PE
Lock	no
Connection method	Screwless terminal points

## 1873207 FKC 2,5/ 2-STF-5,08

## 22 Approvals / Certificates

IECEE CB Scheme 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
	250 V	12 A	-	0.2 - 2.5
EAC 				
VDE Zeichengenehmigung 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
	250 V	12 A	-	0.2 - 2.5
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
	300 V	10 A	26 - 12	-
<b>Usegroup D</b>				
	300 V	10 A	26 - 12	-
VDE Zeichengenehmigung 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
	250 V	12 A	-	0.2 - 2.5

**1873207 FKC 2,5/ 2-STF-5,08****23 Commercial Data**

Order No.	1873207
Type	FKC 2,5/ 2-STF-5,08
Pieces per package	100
Net weight	4.319 g
GTIN	4017918142599
	Information that applies locally, see link on page 1
	Information that applies locally, see link on page 1

**24 corresponding headers**

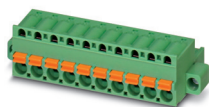
Order No.	Type
1736768	MDSTB 2,5/ 2-GFR-5,08
1736771	MDSTB 2,5/ 2-GFL-5,08
1776508	MSTB 2,5/ 2-GF-5,08
1777073	MSTBV 2,5/ 2-GF-5,08
1836477	MDSTBV 2,5/ 2-GFL-5,08
1836480	MDSTBV 2,5/ 2-GFR-5,08
1842364	MDSTB 2,5/ 2-GF-5,08
1845633	MDSTBV 2,5/ 2-GF-5,08
1898981	DFK-MSTBA 2,5/ 2-GF-5,08
1899281	DFK-MSTBVA 2,5/ 2-GF-5,08
1899618	EMSTB 2,5/ 2-GF-5,08
1915217	EMSTBV 2,5/ 2-GF-5,08
1927564	MSTB 2,5/ 2-GF-5,08 THT
1940897	MSTBV 2,5/ 2-GF-5,08 THT
1954692	CC 2,5/ 2-GF-5,08 P26THR
1954809	CC 2,5/ 2-GF-5,08 P26THRR32
1955633	CCV 2,5/ 2-GF-5,08 P26THR
1955743	CCV 2,5/ 2-GF-5,08 P26THRR32

**25 Accessories**

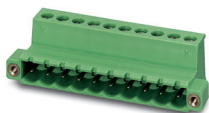
Description	Order No.	Type
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB
Strain relief for snapping into the latching chambers of the plugs, 4-pos.	1876877	STZ 4-FKC-5,08
Strain relief for snapping into the latching chambers of the plug components, 8-pos.	1876880	STZ 8-FKC-5,08
	0201744	MPS-MT
	0201647	RPS
Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip	1205053	SZS 0,6X3,5
	0804293	SK 5,08/3,8:FORTL.ZAHLEN

## 1873207 FKC 2,5/ 2-STF-5,08

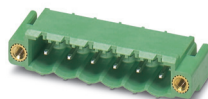
## 26 Combination tests



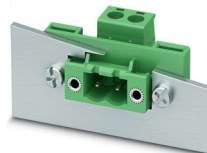
FKC 2,5/...-STF



IC 2,5/...-STGF



CC 2,5/...-GSF



DFK-MSTB 2,5/...-STF-LR



MSTB 2,5/...-GF

IEC 61984	IEC 61984	IEC 61984	IEC 61984	IEC 61984
<b>Mechanical tests (A)</b>				
Insertion/withdrawal force per position	approx. 8 N / 6 N	approx. 8 N / 6 N	approx. 8 N / 6 N	approx. 8 N / 6 N
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed	Test passed
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed	Test passed
<b>Durability tests (B)</b>				
Contact resistance R <sub>1</sub> 1st level	1.5 mΩ	1.1 mΩ	1.5 mΩ	1 mΩ
Contact resistance R <sub>1</sub> 2nd level				
Insertion/withdrawal cycles	25	25	25	25
Contact resistance R <sub>2</sub>	1.6 mΩ	1.2 mΩ	1.6 mΩ	1 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV	2.21 kV	2.21 kV	2.21 kV
<b>Thermal tests (C)</b>				
Tested number of positions	20	24	20	12
Tested conductor cross section	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
Test current	12 A DC	12 A DC	12 A	12 A
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed	Test passed
<b>Climatic tests (D)</b>				
Test sequence 1: low temperature storage	-40 °C/2 h	-40 °C/2 h	-40 °C/2 h	-40 °C/2 h
Test sequence 2: heat storage	100 °C/168 h	100 °C/168 h	100 °C/168 h	105 °C/168 h
Test sequence 3: noxious gas storage (ISO 6988)	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	4.8 kV	4.8 kV	4.8 kV	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.21 kV	2.21 kV	2.21 kV	2.21 kV
<b>Environmental and endurance tests (E)</b>				
Specification	IEC 61984:2008-10	IEC 61984:2008-10	IEC 61984:2008-10	IEC 61984:2008-10
Degree of protection	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger