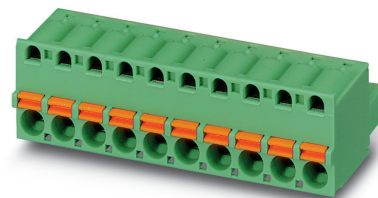


Order No.: 1873197

Type: FKC 2,5/16-ST-5,08

PCB connector, Push-in spring connection



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 16 | • Nominal current | 12 A |
| • Conductor cross section | 2.5 mm ² | • 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
- ✓ Can be combined with the MSTB 2,5 range



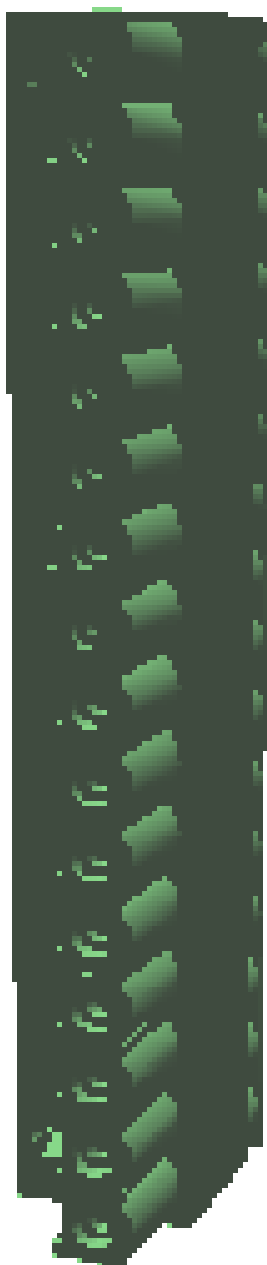
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1873197

3 Table of contents

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1873197 FKC 2,5/16-ST-5,08

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



1873197 FKC 2,5/16-ST-5,08

5 General Technical Data

5.1 item properties

Order No.	1873197
Type	FKC 2,5/16-ST-5,08
Connector system	CLASSIC COMBICON
Product type	PCB connector
Type of contact	Female connector
Range of articles	FKC 2,5/..-ST
Pitch	5.08 mm
Number of positions	16
Number of rows	1
Number of connections	16
Number of potentials	16
Connection method	Push-in spring connection
Connection direction of the conductor to plug-in direction	0 °

1873197 FKC 2,5/16-ST-5,08

6 Mounting

6.1 Flange mounting

Type of locking	without
Mounting flange	without

1873197 FKC 2,5/16-ST-5,08**7 Conductor connection****7.1 Connection capacity**

Nominal cross section	2.5 mm ²
Conductor cross section, rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² ... 2.5 mm ²
2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve	0.5 mm ² ... 1.5 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.4 mm
Stripping length	10 mm

7.2 Connection capacity AWG

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

1873197 FKC 2,5/16-ST-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	

1873197 FKC 2,5/16-ST-5,08**9 Dimensions****9.1 Dimensions for the product**

Length	25.73 mm
Width	81.9 mm
Installed height	15 mm
Total height	15 mm

10 Product notes**10.1 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.
--------------------	--

11 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

12 Application

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

12.1 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)

1873197 FKC 2,5/16-ST-5,08**13 General tests****13.1 Specification**

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

14 Mechanical tests**14.1 Check for damage to conductor or loosening**

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

14.2 Pull-out test

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

14.3 Repeated connection and disconnection

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

14.4 Conductor connection

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

14.5 Visual examination

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

14.6 Dimensional test

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

14.7 Resistance of marking

1873197 FKC 2,5/16-ST-5,08

Resistance of marking

Test passed

Specification

IEC 60068-2-70:1995-12

14.8 Polarization and codingPolarization when inserted
Requirement >20 N

Test passed

Specification

IEC 60512-13-5:2006-02

1873197 FKC 2,5/16-ST-5,08

15 Insertion and withdrawal forces

Insertion and withdrawal force		Test passed
Specification		IEC 60512-13-2:2006-02
No. of cycles		25
Insertion strength per pos. approx.		8 N
Withdraw strength per pos. approx.		6 N

1873197 FKC 2,5/16-ST-5,08**16 Electrical tests**

Rated current / conductor cross section	12 A / 2.5 mm ²
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Contact resistance	1 mΩ
Degree of pollution	2

16.1 Air and creepage distances

Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
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

1873197 FKC 2,5/16-ST-5,08

17 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

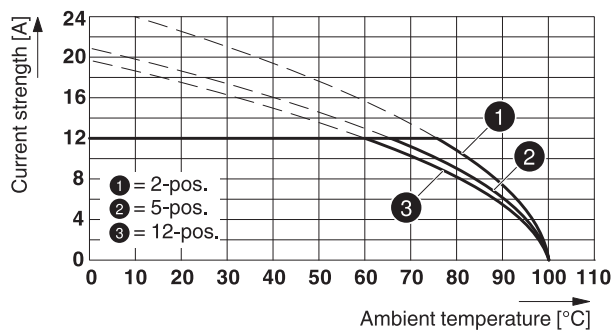
Reduction factor

0.8

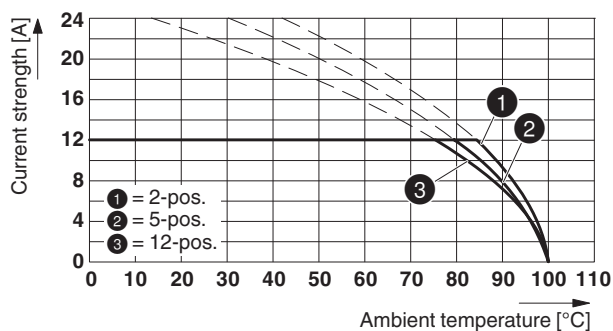
Conductor cross section

2.5 mm²

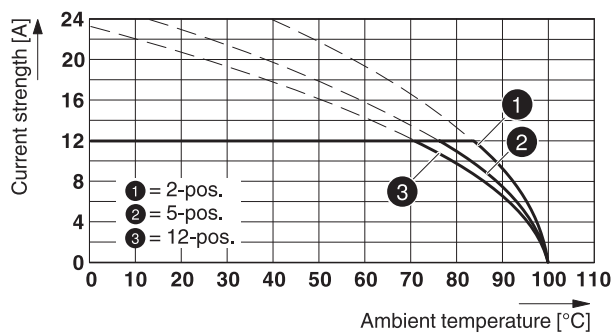
Type: FKC 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

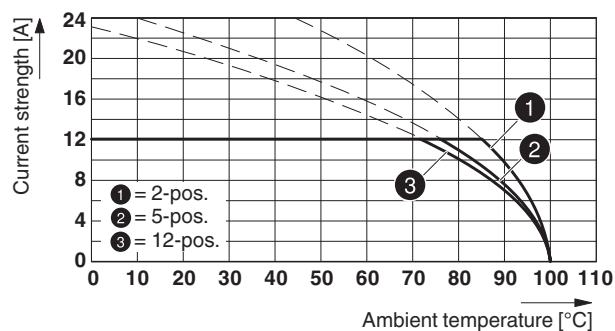
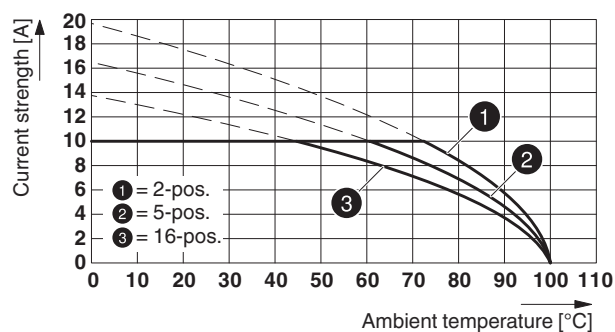
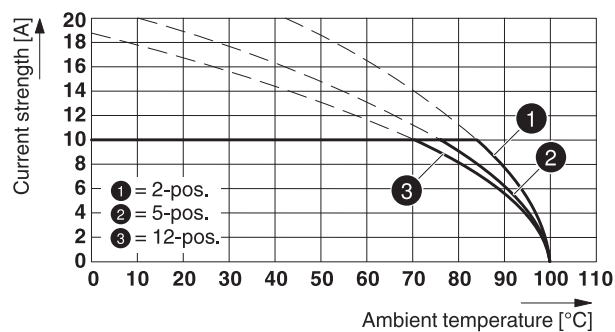


Type: FKC 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P26THR



Type: FKC 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR



1873197 FKC 2,5/16-ST-5,08**Type: FKC 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P26THR****Type: FKC 2,5/...-ST-5,08 with MDSTBVA 2,5/...-G-5,08****Type: FKC 2,5/...-ST-5,08 with MDSTB 2,5/...-G-5,08**

1873197 FKC 2,5/16-ST-5,08

18 Environmental and durability tests

18.1 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	5g (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.

18.2 Insulation resistance

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

1873197 FKC 2,5/16-ST-5,08**19 Type approval and special tests****20 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

1873197 FKC 2,5/16-ST-5,08

21 Approvals / Certificates

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

1873197 FKC 2,5/16-ST-5,08**22 Commercial Data**

Order No.	1873197
Type	FKC 2,5/16-ST-5,08
Pieces per package	50
Net weight	28.13 g
GTIN	4017918142582
	Information that applies locally, see link on page 1

23 corresponding headers

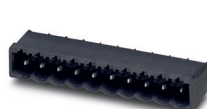
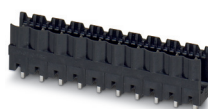
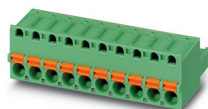
Order No.	Type
1735743	MSTBW 2,5/16-G-5,08
1755875	MSTBVA 2,5/16-G-5,08
1768082	MSTBA 2,5/16-G-5,08-LA
1769609	SMSTB 2,5/16-G-5,08
1808609	MSTBV 2,5/16-GEH-5,08
1859658	EMSTBVA 2,5/16-G-5,08
1880449	EMSTBA 2,5/16-G-5,08
1898978	DFK-MSTBA 2,5/16-G-5,08
1899278	DFK-MSTBVA 2,5/16-G-5,08

24 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
	0201663	MPS-IH WH
	0201676	MPS-IH RD
	0201689	MPS-IH BU
	0201702	MPS-IH GN
	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
	0805412	SK 5,08/3,8:UNBEDRUCKT
	0805085	SK 5,08/3,8:SO
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT

1873197 FKC 2,5/16-ST-5,08

25 Combination tests

**FKC 2,5/16-ST**

IEC 61984

Mechanical tests (A)

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

Durability tests (B)Contact resistance R_1 1st level

1 mΩ

0.9 mΩ

1.1 mΩ

1.1 mΩ

Contact resistance R_1 2nd level

Insertion/withdrawal cycles

25

25

25

25

Contact resistance R_2

1.1 mΩ

1 mΩ

1.2 mΩ

1.3 mΩ

Rated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$

4.8 kV

4.8 kV

4.8 kV

4.8 kV

Power-frequency withstand voltage
Voltage waveform $\geq (50/60 \text{ Hz})$

2.21 kV

2.21 kV

2.21 kV

2.21 kV

Thermal tests (C)

Tested number of positions

12

12

24

12

Tested conductor cross section

2.5 mm²2.5 mm²2.5 mm²2.5 mm²

Test current

12 A

12 A

12 A DC

12 A DC

Upper limiting temperature
Requirements < 100°C

Test passed

Test passed

Test passed

Test passed

Climatic tests (D)

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

100 °C/168 h

Test sequence 3: noxious gas storage
(ISO 6988)0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycleRated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$

4.8 kV

4.8 kV

4.8 kV

4.8 kV

Power-frequency withstand voltage
Voltage waveform $\geq (50/60 \text{ Hz})$

2.21 kV

2.21 kV

2.21 kV

2.21 kV

Environmental and endurance tests (E)

Specification

IEC 61984:2008-10

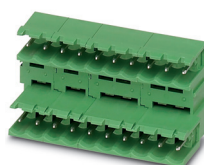
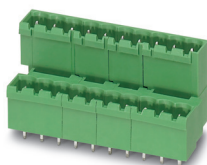
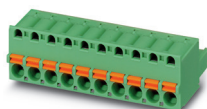
IEC 61984:2008-10

IEC 61984:2008-10

IEC 61984:2008-10

Degree of protection

Finger safety with IP20
test fingerFinger safety with IP20
test fingerFinger safety with IP20
test fingerFinger safety with IP20
test finger

1873197 FKC 2,5/16-ST-5,08**FKC 2,5/...-ST**

IEC 61984

Mechanical tests (A)

Insertion/withdrawal force per position

Polarization when inserted
Requirement >20 NContact holder in insert
Requirements >20 N**Durability tests (B)**Contact resistance R_1 1st levelContact resistance R_1 2nd level

Insertion/withdrawal cycles

Contact resistance R_2 Rated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage
Voltage waveform $\geq (50/60 \text{ Hz})$ **Thermal tests (C)**

Tested number of positions

Tested conductor cross section

Test current

Upper limiting temperature
Requirements < 100°C**Climatic tests (D)**

Test sequence 1: low temperature storage

Test sequence 2: heat storage

Test sequence 3: noxious gas storage
(ISO 6988)Rated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage
Voltage waveform $\geq (50/60 \text{ Hz})$ **Environmental and endurance tests (E)**

Specification

Degree of protection

MDSTBVA 2,5/...-G

IEC 61984

approx. 8 N / 6 N

Test passed

Test passed

2.3 m Ω 1.4 m Ω

25

2.3 m Ω

4.8 kV

2.21 kV

16

2.5 mm²

10 A DC

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

4.8 kV

2.21 kV

IEC 61984:2008-10

Finger safety with IP20
test finger**MDSTB 2,5/...-G**

IEC 61984

approx. 8 N / 6 N

Test passed

Test passed

1.1 m Ω 1.4 m Ω

25

1.2 m Ω

4.8 kV

2.21 kV

12

2.5 mm²

10 A

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

4.8 kV

2.21 kV

IEC 61984:2008-10

Finger safety with IP20
test finger