

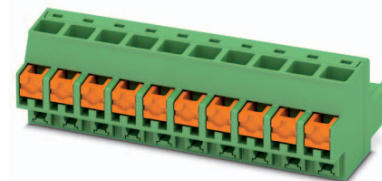
Data sheet

2017-07-06
Product version 00
Document revision 1

Order No.: 1861344

Type: FKCOR 2,5/13-ST-5,08

Plug component, Push-in spring connection



The figure shows a 10-position version

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 13 | • Nominal current | 12 A |
| • Conductor cross section | 2.5 mm ² | • Nominal voltage | 320 V |
| • Color | green | • Connection direction | 90 ° |
| • Pitch | 5.08 mm | • Type of packaging | packed in cardboard |
| • Connection method | Push-in spring connection | | |

2 Your advantages

- ✓ The conductor connection orthogonal to the direction of operation simplifies the cabling of DIN-rail-mountable devices
- ✓ 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/1861344

3 Table of contents

1	Main features	1
2	Your advantages	1
3	Table of contents	2
4	item properties	3
4.1	Connection capacity	3
4.2	Specifications for ferrules	3
4.3	Material data	3
5	Dimensions	3
5.1	Dimensions for the product	3
6	Series drawing	5
7	Packaging information	6
8	Application	6
8.1	Temperature limit values	6
9	Mechanical tests	7
9.1	Termination and connection method	7
9.2	Pull-out test	7
10	Electrical tests	8
10.1	Electrical data	8
10.2	Air and creepage distances	8
11	Current carrying capacity/derating curves	9
12	Environmental and durability tests	10
12.1	Vibration test	10
13	Classification for connectors	10
14	Approvals	10
15	Commercial Data	11
16	Accessories	11
17	Combination tests	12

1861344 FKCOR 2,5/13-ST-5,08**4 item properties**

Order No.	1861344
Type	FKCOR 2,5/13-ST-5,08
Type of contact	Female connector
Range of articles	FKCOR 2,5/...-ST
Pitch	5.08 mm
Number of positions	13
Connection method	Push-in spring connection

4.1 Connection capacity

Conductor cross section, solid	0.2 mm ² to 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² to 2.5 mm ²
Conductor cross section AWG/kcmil	24 to 12
Stripping length	10 mm

4.2 Specifications for ferrules

Ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.25 mm ² ; Length: 7 mm Cross section: 0.34 mm ² ; Length: 7 mm 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: 8 mm ... 10 mm
Ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.14 mm ² ; Length: 8 mm Cross section: 0.25 mm ² ; Length: 8 mm ... 10 mm Cross section: 0.34 mm ² ; Length: 8 mm ... 10 mm Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm Cross section: 1.5 mm ² ; Length: 8 mm ... 10 mm Cross section: 2.5 mm ² ; Length: 10 mm

4.3 Material data

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	Sn 4 µm ... 8 µm	
Surface contact area	Sn 4 µm ... 8 µm	
Surface characteristics	hot-dip tin-plated	
Insulating material data	Housing	
Insulating material	PA	PBT
CTI according to IEC 60112	600	275
Flammability rating according to UL 94	V0	V0
Color	green (6021)	

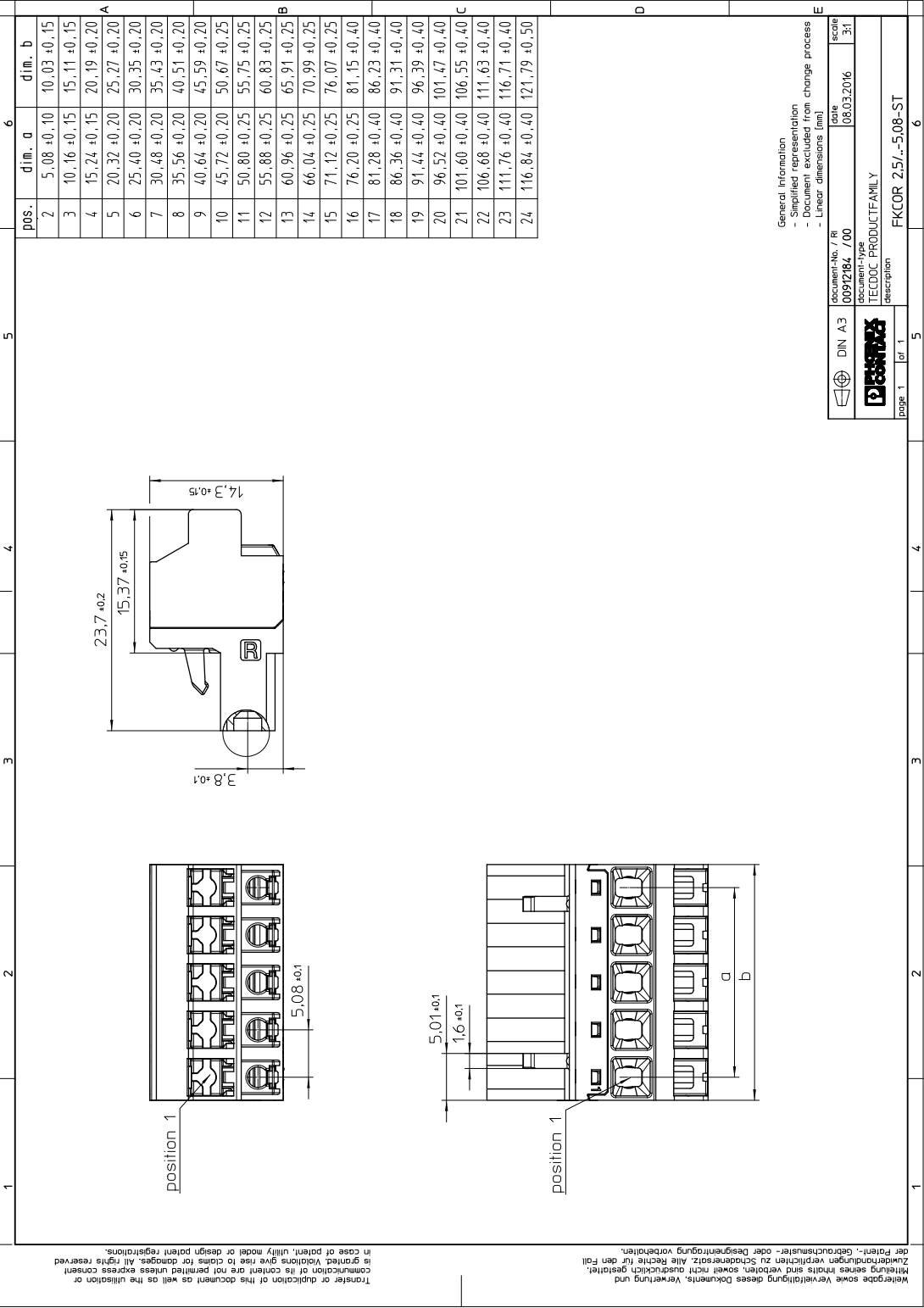
5 Dimensions**5.1 Dimensions for the product**

1861344 FKCOR 2,5/13-ST-5,08

Document revision 1

Length	23.7 mm
Width	65.91 mm
Total height	14.3 mm
Dimension a	60.96 mm

6 Series drawing



7 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

8 Application

8.1 Temperature limit values

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

1861344 FKCOR 2,5/13-ST-5,08**9 Mechanical tests****Mechanical test group A**

Specification	IEC 61984:2008-10
Visual test	Test passed
Specification	IEC 60512-1-1:2002-02
Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02
Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12
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.	11 N
Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N
Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	20 N

9.1 Termination and connection method

Specification	IEC 60999-1:1999-11
Check for damage to conductor or loosening	Test passed

9.2 Pull-out test**Termination and connection method: 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 / stranded / > 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 / stranded / > 50 N
Conductor cross section/conductor type/tractive force actual value	AWG 12 / stranded / > 60 N

1861344 FKCOR 2,5/13-ST-5,08**10 Electrical tests****10.1 Electrical data**

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	1.3 mΩ
Degree of pollution	2

10.2 Air and creepage distances

Component	Plug component		
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	250 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	3.2 mm	3 mm	3.2 mm

1861344 FKCOR 2,5/13-ST-5,08**11 Current carrying capacity/derating curves**

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	0.8
Number of positions	See diagram
Conductor cross section	2.5 mm ²

Type: FKCO(R/W) 2,5/...-ST-5,08-LR with MSTBA(R/W) 2,5/...-G-5,08-LR

81345_1000_en

Type: FKCO(R/W) 2,5/...-ST-5,08(-LR) with MSTBVA 2,5/...-ST-5,08(-LR)

81491_1000_en

1861344 FKCOR 2,5/13-ST-5,08**12 Environmental and durability tests****12.1 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

13 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

14 Approvals

cULus Recognized 				
Use group	B	D		
mm ² /AWG/kcmil	26-12	26-12		
Voltage	300 V	300 V		
Current	12 A	10 A		

1861344 FKCOR 2,5/13-ST-5,08**15 Commercial Data**

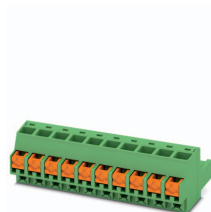
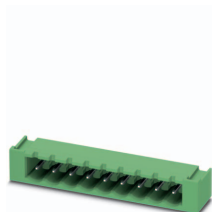
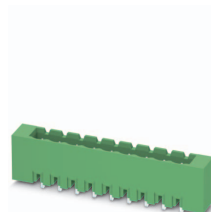
Order No.	1861344
Type	FKCOR 2,5/13-ST-5,08
Pieces per package	50
Net weight	2.22 g
GTIN	4055626125459
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

16 Accessories

Description	Order No.	Type
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB
	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

1861344 FKCOR 2,5/13-ST-5,08

17 Combination tests

**FKCOR 2,5/..-ST****MSTBA 2,5/..-G-LR****MSTBVA 2,5/..-G-LR**

Specification

IEC 61984

IEC 61984

Mechanical tests (A)

Insertion/withdrawal force per position

approx. 8 N / 11 N

approx. 10 N / 12 N

Polarization when inserted
Requirement > 20 N

Test passed

Test passed

Contact holder in insert
Requirements > 20 N

Test passed

Test passed

Endurance tests (B)Contact resistance R_1

1.3 mΩ

2.5 mΩ

Insertion/withdrawal cycles

25

25

Contact resistance R_2

1.3 mΩ

2.4 mΩ

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

4.8 kV

4.8 kV

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

2.21 kV

2.21 kV

Insulation resistance
Requirements > 5 MΩ

> 1.5 TΩ

> 1 TΩ

Thermal tests (C)

Tested number of positions

24

24

Tested conductor cross section

2.5 mm²2.5 mm²

Test current

12 A

12 A

Upper limiting temperature
Requirements < 100°C

Test passed

Test passed

Climatic tests (D)

Test sequence 1: low temperature storage

-40 °C/2 h

-40 °C/2 h

Test sequence 2: heat storage

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

4.8 kV

4.8 kV

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

2.21 kV

2.21 kV

Environmental and endurance tests (E)

Specification

IEC 61984:2008-10

IEC 61984:2008-10

Degree of protection

Finger safety with IP20
test fingerFinger safety with IP20
test finger