

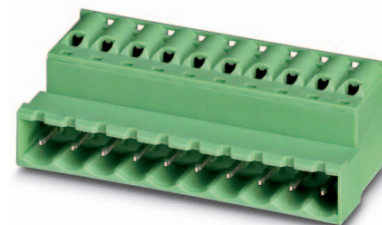
Data sheet

2017-10-11
Product version 05
Document revision 0

Order No.: 1873414

Type: FKIC 2,5/ 8-ST-5,08

Plug component, Push-in spring connection



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|---------------------|
| • No. of pos. | 8 | • Nominal current | 12 A |
| • Conductor cross section | 2.5 mm ² | • Nominal voltage | 320 V |
| • Color | green | • 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
- ✓ Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- ✓ 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/1873414

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1873414 FKIC 2,5/ 8-ST-5,08

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



1873414 FKIC 2,5/ 8-ST-5,08**5 item properties**

Order No.	1873414
Type	FKIC 2,5/ 8-ST-5,08
Type of contact	Male connector
Range of articles	FKIC 2,5/...-ST
Pitch	5.08 mm
Number of positions	8
Connection method	Push-in spring connection
Locking	without

5.1 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
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² to 2.5 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² to 2.5 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm ² to 1 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.0 mm
Stripping length	10 mm

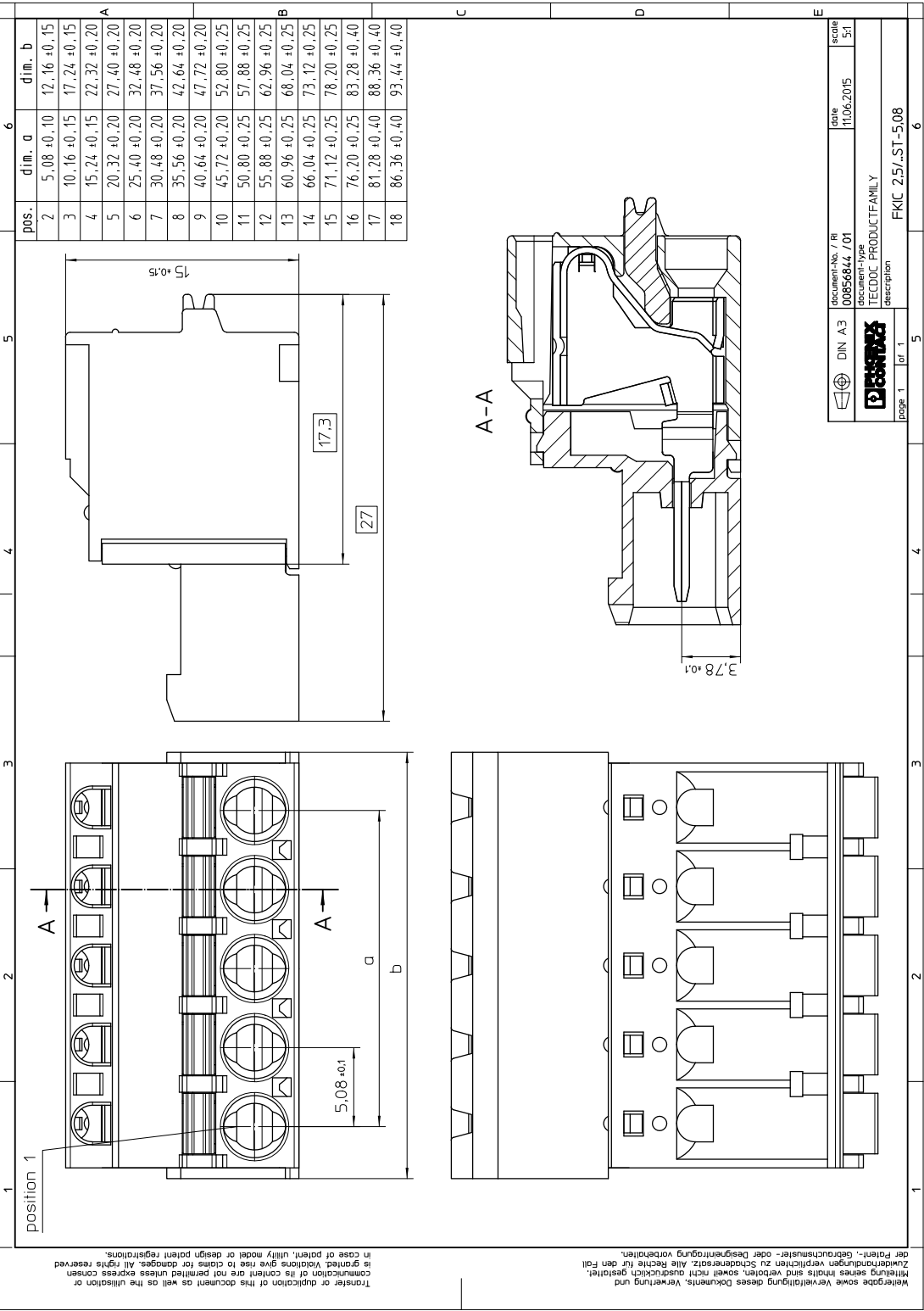
5.2 Material data

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 5 µm ... 7 µm	
Surface contact area	Sn 5 µm ... 7 µm	
Surface characteristics	hot-dip tin-plated	
Insulating material data	Housing	Actuation element
Insulating material	PA	PBT
CTI according to IEC 60112	600	600
Flammability rating according to UL 94	V0	V0
Color	green (6021)	orange
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	

6 Dimensions**6.1 Dimensions for the product**

Length	27.5 mm
Width	42.64 mm
Total height	15 mm
Dimension a	35.56 mm

7 Series drawing



1873414 FKIC 2,5/ 8-ST-5,08

8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

9 Application

9.1 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)

1873414 FKIC 2,5/ 8-ST-5,08**10 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.	6 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.	32 N

10.1 Termination and connection method

Specification	IEC 60999-1:1999-11
Conductor connection	Test passed
Repeated connection and disconnection	Test passed
Check for damage to conductor or loosening	Test passed

10.2 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

1873414 FKIC 2,5/ 8-ST-5,08**11 Electrical tests****11.1 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	1.5 mΩ
Degree of pollution	2

11.2 Air and creepage distances

Component	Plug component		
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

11.3 Electrical function

Specification	IEC 60999-1:1999-11
Result	Test passed
Voltage drop	Voltage drop (U) after the load ≤ 15 mV
Conductor cross section, flexible	0.2 mm ² to 2.5 mm ²
Conductor cross section, solid	0.2 mm ² to 2.5 mm ²

11.4 Temperature cycles

Specification	IEC 60999-1:1999-11
Result	Test passed
Voltage drop	Voltage drop (U) after the load ≤ 22.5 mV or $1.5 \times U_{\text{after 24 h}}$ The small value is to be used.
Test current (minimum cross section)	
Test current (maximum cross section)	
Temperature cycles	192
Conductor cross section, flexible	0.2 mm ² to 2.5 mm ²
Conductor cross section, solid	0.2 mm ² to 2.5 mm ²

1873414 FKIC 2,5/ 8-ST-5,08**12 Current carrying capacity/derating curves**

Specification

IEC 61984:2008-10

Note

Representation based on IEC 60512-5-2:2002-02

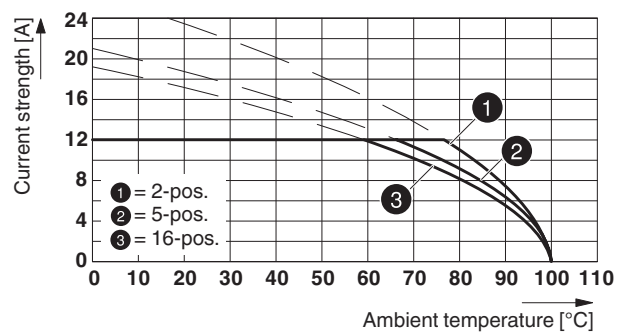
Reduction factor

0.8

Number of positions

See diagram

Conductor cross section

2.5 mm²**Type: FKIC 2,5/..-ST-5,08 with ICV 2,5/..-G-5,08**

1873414 FKIC 2,5/ 8-ST-5,08**13 Environmental and durability tests****13.1 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

14 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

15 Approvals

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

VDE Gutachten mit Fertigungsüberwachung 				
mm ² /AWG/kcmil	0.2-2.5			
Voltage	250 V			
Current	12 A			

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

IECEE CB Scheme 				
mm ² /AWG/kcmil	0.2-2.5			
Voltage	250 V			
Current	12 A			

1873414 FKIC 2,5/ 8-ST-5,08

EAC 

cULus Recognized 

1873414 FKIC 2,5/ 8-ST-5,08**16 Commercial Data**

Order No.	1873414
Type	FKIC 2,5/ 8-ST-5,08
Pieces per package	50
Net weight	13.204 g
GTIN	4017918142803
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

17 corresponding headers

Order No.	Type
1792304	MVSTBR 2,5/ 8-ST-5,08
1873113	FKC 2,5/ 8-ST-5,08
1757077	MSTB 2,5/ 8-ST-5,08
1833878	UMSTBVK 2,5/ 8-ST-5,08
1831375	MSTBVK 2,5/ 8-ST-5,08
1826348	SMSTB 2,5/ 8-ST-5,08
1824188	MSTBU 2,5/ 8-STD-5,08
1809569	MSTBC 2,5/ 8-STZ-5,08
1792812	MVSTBW 2,5/ 8-ST-5,08
1786462	IC 2,5/ 8-G-5,08
1786006	ICV 2,5/ 8-G-5,08
1917969	QC 0,75/ 8-ST-5,08
1883310	QC 1/ 8-ST-5,08
1874015	FKCVR 2,5/ 8-ST-5,08
1873715	FKCVW 2,5/ 8-ST-5,08
1873029	ZFKK 1,5-ICV-5,08
1872758	A-ICV 2,5/ 8-G-5,08
1853078	TMSTBP 2,5/ 8-ST-5,08
1781043	MSTBT 2,5/ 8-ST-5,08
1777345	FRONT-MSTB 2,5/ 8-ST-5,08
1769078	MSTBP 2,5/ 8-ST-5,08
1764235	MSTB 2,5/ 8-STZ-5,08
1902178	FKCT 2,5/ 8-ST-5,08
1808874	MSTBC 2,5/ 8-ST-5,08

18 Accessories

Description	Order No.	Type
Coding section, inserted into the recess in the header or the inverted plug, red insulating material	1734401	CR-MSTB
	0201647	RPS
	0201744	MPS-MT
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
	0804293	SK 5,08/3,8:FORTL.ZAHLEN
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

1873414 FKIC 2,5/ 8-ST-5,08**19 Combination tests****FKIC 2,5/..-ST**

Specification

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

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 $\geq (50/60 \text{ Hz})$ Insulation resistance
Requirements > 5 M Ω **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

**FKIC 2,5/..-ST**

IEC 61984

approx. 8 N / 6 N

Test passed

Test passed

1.5 m Ω

25

1.5 m Ω

4.8 kV

2.21 kV

> 0.3 T Ω

16

2.5 mm²

12 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**FKIC 2,5/..-ST**

IEC 61984