

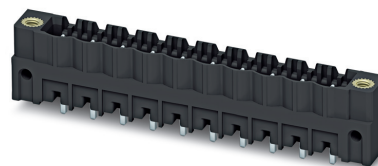
Data sheet

2020-08-03
Product version 03
Document revision 0

Order No.: 1792782

Type: CCV 2,5/ 7-GF-5,08-LR P26THR

PCB headers



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|-------------------------|---------------------|------------------------|---------------------|
| • No. of pos. | 7 | • Nominal current | 12 A |
| • Nominal cross section | 2.5 mm ² | • Nominal voltage | 320 V |
| • Color | black (9005) | • Connection direction | 90 ° |
| • Pitch | 5.08 mm | • Type of packaging | packed in cardboard |
| • Mounting type | THR soldering | | |

2 Your advantages

- ✓ Designed for integration into the SMT soldering process
- ✓ Vertical connection enables multi-row arrangement on the PCB
- ✓ Screwable flange for superior mechanical stability
- ✓ Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1792782

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**3 Table of contents**

1	Main features	1
2	Your advantages	1
3	Table of contents	2
4	3D model in PDF can be activated (Acrobat Reader only)	3
5	General Technical Data	4
	5.1 Item properties	4
6	Mounting.....	5
	6.1 Flange fixing	5
7	Material properties.....	5
	7.1 Material of metal parts.....	5
8	Dimensions.....	6
	8.1 Dimensions for the product	6
9	Series drawing.....	7
10	Application.....	8
11	Packaging information	8
	11.1 Temperature limit values	8
12	Mechanical tests.....	9
	12.1 Visual examination	9
	12.2 Dimensional test.....	9
	12.3 Resistance of marking	9
	12.4 Polarization and coding	9
	12.5 Contact retention in insert	9
13	Insertion and withdrawal forces	10
14	Electrical tests	11
	14.1 Electrical data	11
	14.2 Air and creepage distances	11
15	Current carrying capacity/derating curves	12
	15.1 Insulation resistance.....	14
	15.2 Vibration test	14
16	Approvals / Certificates.....	15
17	Commercial Data.....	16
18	Accessories.....	16
19	Combination tests.....	17

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR

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



1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**5 General Technical Data****5.1 item properties**

Order No.	1792782
Type	CCV 2,5/ 7-GF-5,08-LR P26THR
Plug-in system	CLASSIC COMBICON
Product type	PCB headers
Type of contact	Male connector
Range of articles	CCV 2,5/..-GF-LR
Pitch	5.08 mm
Range of positions	2...24
Number of positions	7
Number of levels	1
Number of connections	7
Number of potentials	7
Mounting type	THR soldering
Connection direction of the connector to the PCB	90 °
Pin layout	Linear pinning
Solder pins per potential	1
Type	Component suitable for through hole reflow

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**6 Mounting****6.1 Flange fixing**

Type of locking	Snap-in locking
Mounting flange	Lock & release threaded flange

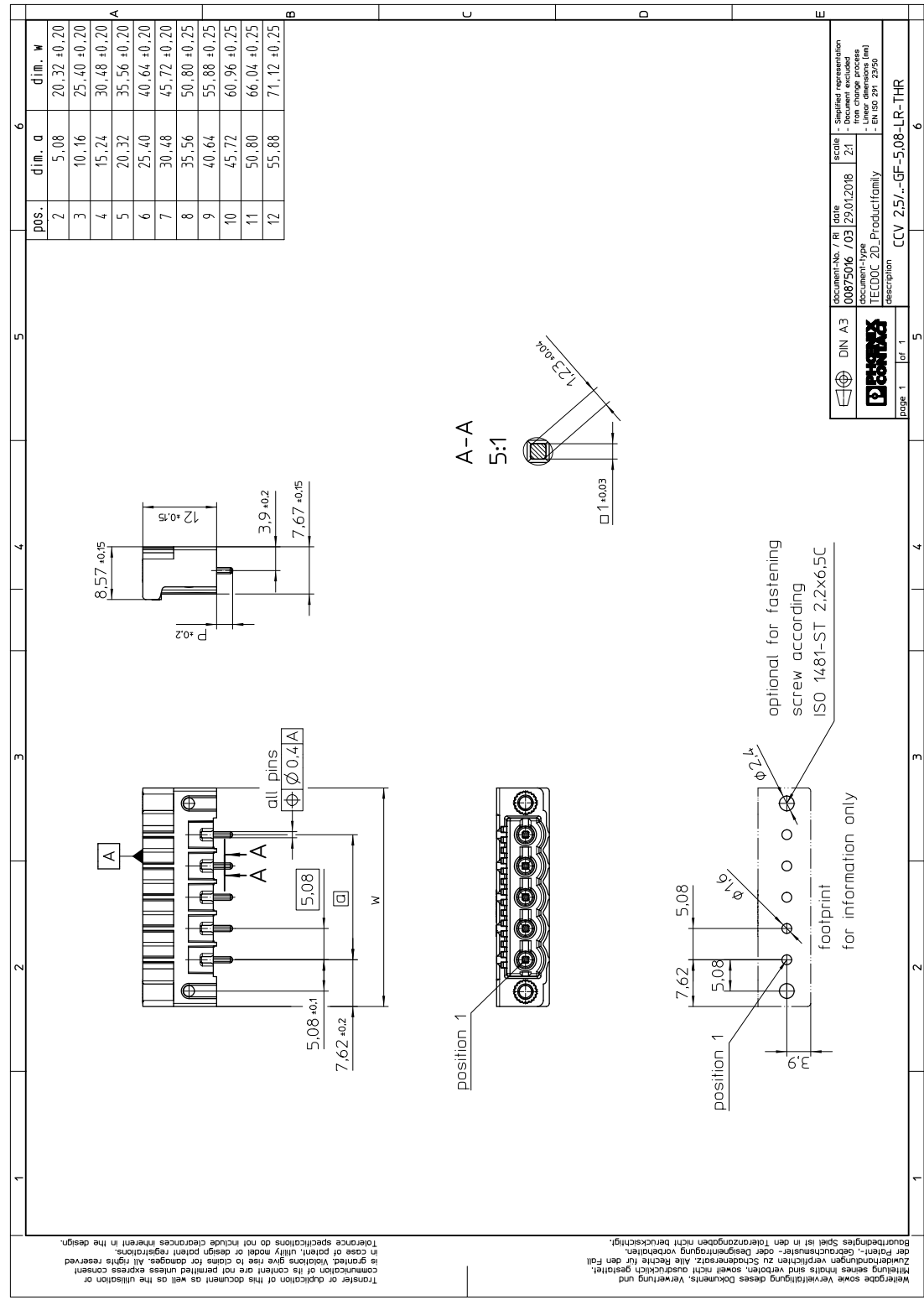
7 Material properties**7.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface contact area	Nickel (1.3 - 3 µm Ni), , Tin (3 - 5 µm Sn)
Soldering area surface	Nickel (1.3 - 3 µm Ni) , Tin (3 - 5 µm Sn)
Surface characteristics	Tin-plated
Insulating material data	Housing
Color	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**8 Dimensions****8.1 Dimensions for the product**

Length	8.6 mm
Width	45.72 mm
Height (without solder pin)	12 mm
Total height	14.6 mm
Solder pin [P]	2.6 mm
Dimension a	30.48 mm

9 Series drawing



1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**10 Application****11 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	50

11.1 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)

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**12 Mechanical tests****12.1 Visual examination**

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

12.2 Dimensional test

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

12.3 Resistance of marking

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

12.4 Polarization and coding

Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N

12.5 Contact retention in insert

Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	37 N

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**13 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.

11 N

Withdraw strength per pos. approx.

9 N

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**14 Electrical tests****14.1 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	1.2 mΩ
Degree of pollution	2

14.2 Air and creepage distances

Component	PCB headers		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	IIIa		
Comparative tracking index (IEC 60112:2003-01)	CTI 175		
Rated insulation voltage	250 V	320 V	400 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	3.2 mm	4 mm

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR

15 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

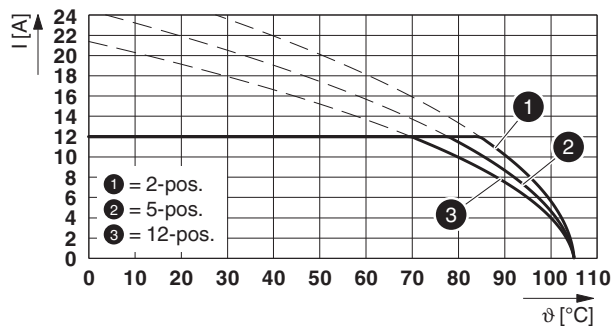
Reduction factor

0.8

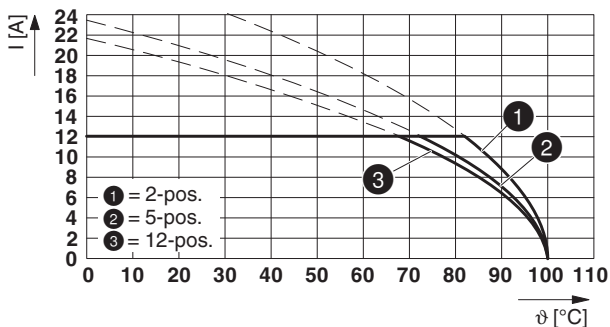
Conductor cross section

2.5 mm²

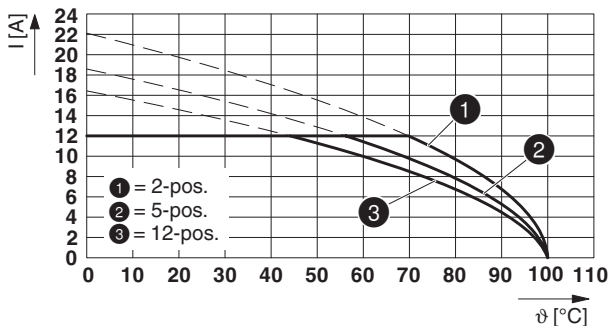
Type: FKCNC 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P... THR

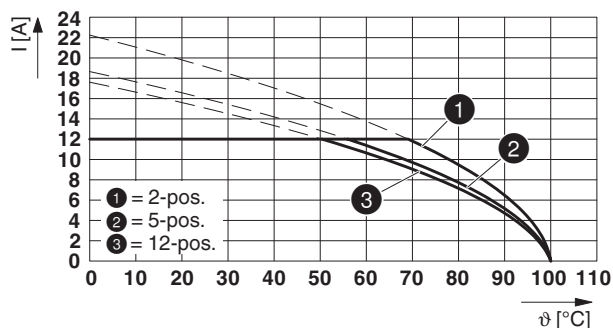
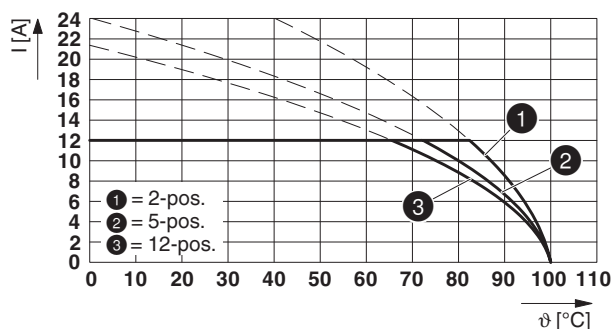
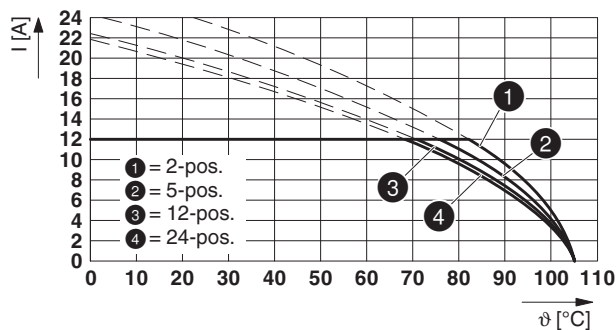
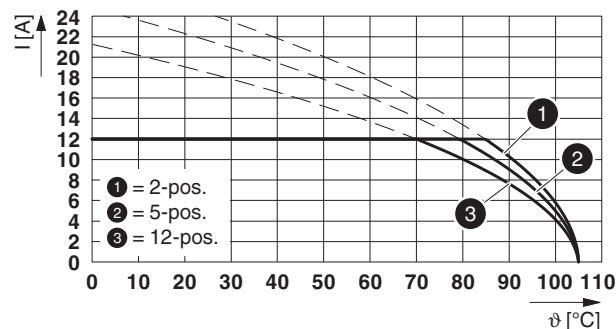


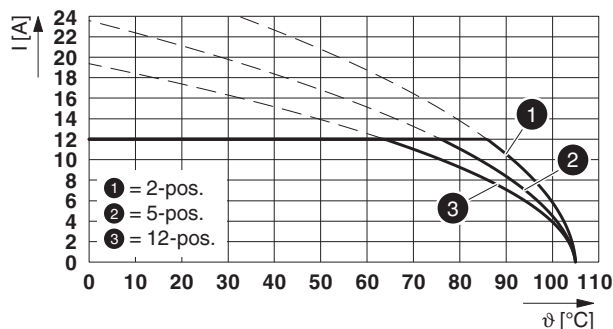
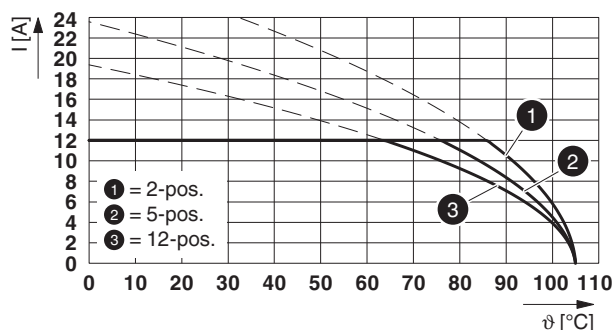
Type: MSTBT 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P...THR



Type: MVSTB(R/W) 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR



1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**Type: SMSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR****Type: MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR****Type: FRONT-MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR****Type: FKCS 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR**

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**Type: FKCVR 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR****Type: FKCVW 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR****15.1 Insulation resistance**

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 33 GΩ

15.2 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.

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**16 Approvals / Certificates**

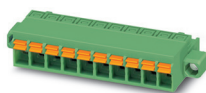
IECEE CB Scheme 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
	400 V	12 A	-	-
EAC 				
VDE Gutachten mit Fertigungsüberwachung 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
	400 V	12 A	-	-
cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm ²]
Usegroup B				
	300 V	16 A	-	-
Usegroup D				
	300 V	10 A	-	-

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**17 Commercial Data**

Order No.	1792782
Type	CCV 2,5/ 7-GF-5,08-LR P26THR
Pieces per package	50
Net weight	4.104 g
GTIN	4046356615792
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

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
HT coding section, prior to the reflow soldering process it is inserted into the recess on the header, made from high-temperature-resistant beige insulation material	1954362	CR-MSTB NAT HT

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**19 Combination tests****CCV 2,5/..-GF-LR****FKCN 2,5/..-STF****MSTBT 2,5/..-STF****MVSTBW 2,5/..-STF****SMSTB 2,5/..-STF**

IEC 61984

IEC 61984

IEC 61984

IEC 61984

IEC 61984

Mechanical tests (A)

Insertion/withdrawal force per position

approx. 11 N / 9 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 1.2 m Ω 1.1 m Ω 2.1 m Ω 2 m Ω

Insertion/withdrawal cycles

25

25

25

25

Contact resistance R_2 1.4 m Ω 1.1 m Ω 2.1 m Ω 2.1 m Ω Rated impulse voltage at sea level
Voltage waveform $\geq$ (1.2/50 μ s)

4.8 kV

4.8 kV

4.8 kV

4.8 kV

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

2.21 kV

2.21 kV

2.21 kV

2.21 kV

Thermal tests (C)

Tested number of positions

12

12

12

12

Tested conductor cross section

2.5 mm²2.5 mm²2.5 mm²2.5 mm²

Test current

12 A

12 A

12 A

12 A

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

105 °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 μ s)

4.8 kV

4.8 kV

4.8 kV

4.8 kV

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

2.21 kV

2.21 kV

2.21 kV

2.21 kV

Environmental and endurance tests (E)

Specification

IEC 61984:2008-10

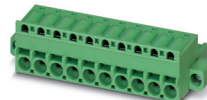
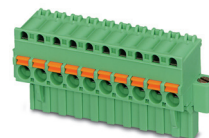
IEC 61984:2008-10

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

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**CCV 2,5/..-GF-LR****MSTB 2,5/..-STF****FRONT-MSTB 2,5/..-STF****FKCS 2,5/..-STF****FKCVR 2,5/..-STF**

IEC 61984

IEC 61984

IEC 61984

IEC 61984

IEC 61984

Mechanical tests (A)

Insertion/withdrawal force per position

approx. 8 N / 6 N

approx. 11 N / 8 N

approx. 8 N / 6 N

approx. 10 N / 8 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

1.2 mΩ

1.3 mΩ

1 mΩ

1.1 mΩ

Insertion/withdrawal cycles

25

25

25

25

Contact resistance R_2

1.3 mΩ

1.3 mΩ

1.1 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

12

12

Tested conductor cross section

2.5 mm²2.5 mm²2.5 mm²2.5 mm²

Test current

12 A

12 A

12 A

12 A

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

105 °C/168 h

105 °C/168 h

105 °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

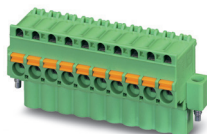
IEC 61984:2008-10

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

1792782 CCV 2,5/ 7-GF-5,08-LR P26THR**CCV 2,5/...-GF-LR**

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

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

FKCVW 2,5/...-STF

IEC 61984

approx. 10 N / 8 N

Test passed

Test passed

1.1 m Ω

25

1.3 m Ω

4.8 kV

2.21 kV

12

2.5 mm²

12 A

Test passed

-40 °C/2 h

105 °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