

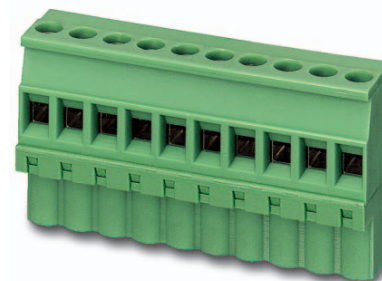
Data sheet

2017-10-24
Product version 01
Document revision 0

Order No.: 1792870

Type: MVSTBW 2,5/14-ST-5,08

Plug component, Screw connection with tension sleeve



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos. | 14 | • 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 | Screw connection with tension sleeve | | |

2 Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Allows connection of two conductors
- ✓ Low temperature rise, thanks to maximum contact force



Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1792870

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	item properties	4
	5.1 Connection capacity	4
	5.2 Material data	4
6	Dimensions	4
	6.1 Dimensions for the product	5
7	Series drawing	6
8	Packaging information	7
9	Application	7
	9.1 Temperature limit values	7
10	Mechanical tests	8
	10.1 Termination and connection method	8
	10.2 Pull-out test	8
11	Electrical tests	9
	11.1 Electrical data	9
	11.2 Air and creepage distances	9
12	Current carrying capacity/derating curves	10
13	Environmental and durability tests	12
	13.1 Vibration test	12
14	Classification for connectors	12
15	Approvals	12
16	Commercial Data	14
17	corresponding headers	14
18	Accessories	14
19	Combination tests	15

1792870 MVSTBW 2,5/14-ST-5,08**4 3D model in PDF can be activated (Acrobat Reader only)**

1792870 MVSTBW 2,5/14-ST-5,08**5 item properties**

Order No.	1792870
Type	MVSTBW 2,5/14-ST-5,08
Type of contact	Female connector
Range of articles	MVSTBW 2,5/...-ST
Pitch	5.08 mm
Number of positions	14
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
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
2 conductors with same cross section, solid	0.2 mm ² to 1 mm ²
2 conductors with same cross section, stranded	0.2 mm ² to 1.5 mm ²
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 ferrule without plastic sleeve	0.25 mm ² to 1 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm ² to 1.5 mm ²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.4 mm
Stripping length	7 mm

5.2 Material data

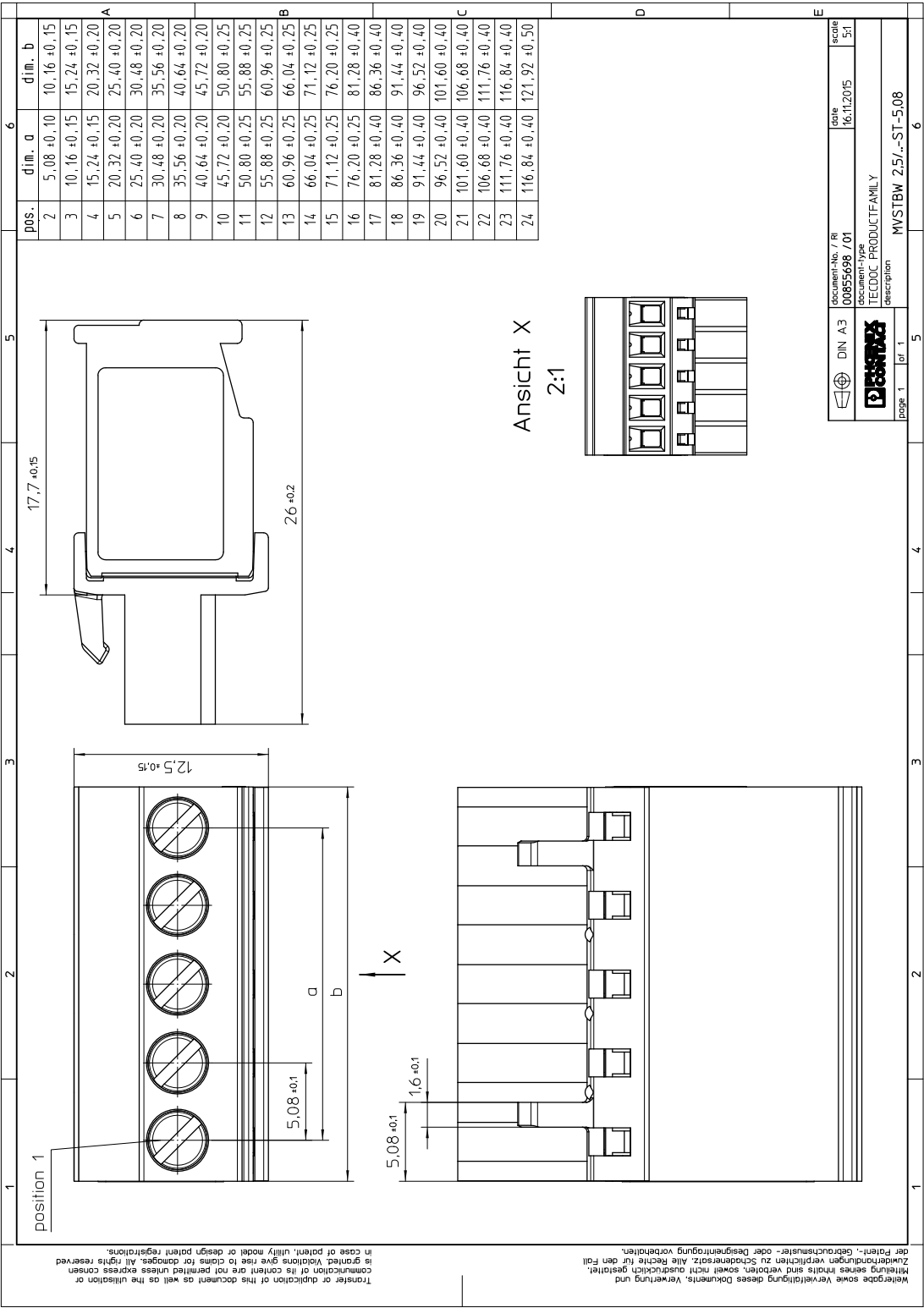
Material of metal parts		
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201	
Contact material	Cu alloy	
Terminal point surface	Sn 5 µm ... 7 µm	
Surface contact area	Sn 5 µm ... 7 µm	
Surface characteristics	hot-dip tin-plated	
Insulating material data	Housing	
Insulating material	PA	
CTI according to IEC 60112	600	
Flammability rating according to UL 94	V0	
Color	green (6021)	
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

1792870 MVSTBW 2,5/14-ST-5,08**6.1 Dimensions for the product**

Length	12.5 mm
Width	71.12 mm
Total height	26 mm
Dimension a	66.04 mm

7 Series drawing



1792870 MVSTBW 2,5/14-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)

1792870 MVSTBW 2,5/14-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.	35 N

10.1 Termination and connection method

Specification	IEC 60999-1:1999-11
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

1792870 MVSTBW 2,5/14-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	2.8 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	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	4 mm	3 mm	3.2 mm

1792870 MVSTBW 2,5/14-ST-5,08**12 Current carrying capacity/derating curves**

Specification

IEC 61984:2008-10

Note

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

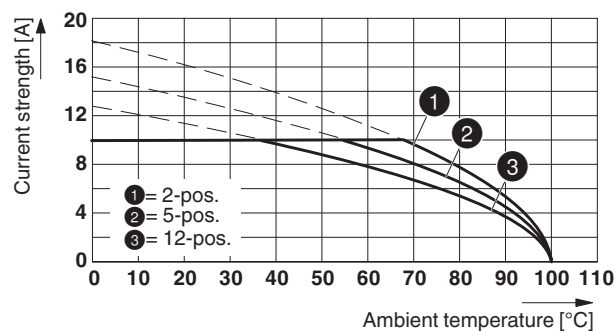
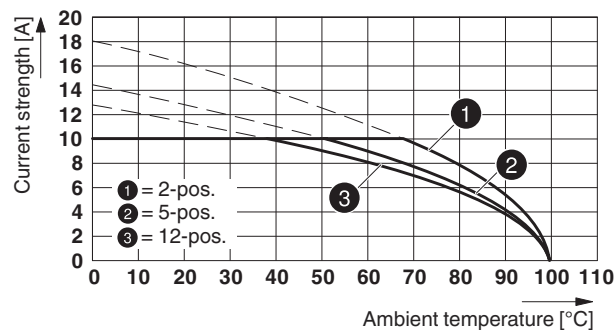
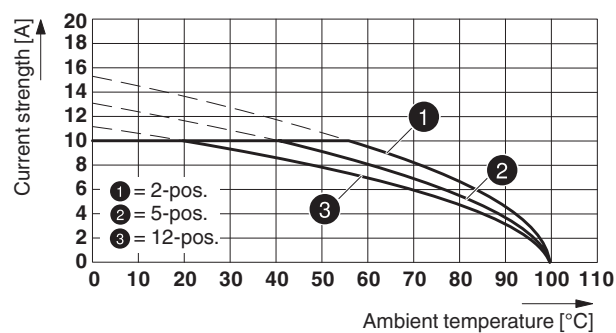
Reduction factor

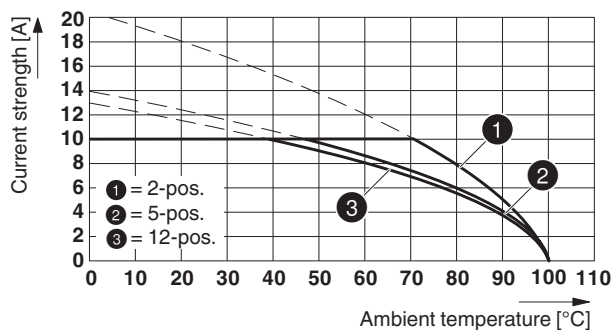
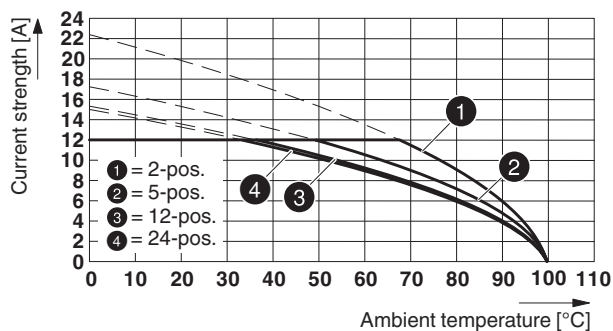
0.8

Number of positions

See diagram

Conductor cross section

2.5 mm²**Type: MVSTBW 2,5/...-ST-5,08 with MDSTB 2,5/...-G-5,08****Type: MVSTB(R/W) 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08****Type: MVSTB(R/W) 2,5/...-ST with MDSTBV 2,5/...-G-5,08**

1792870 MVSTBW 2,5/14-ST-5,08**Type: MVSTB(R/W) 2,5/...-ST-5,08 with MDSTBW 2,5/...-G-5,08****Type: MVSTB(R/W) 2,5/...-ST with MDSTBVA 2,5/...-G-5,08****Type: MVSTB(R/W) 2,5/...-ST with MDSTBVA 2,5/...-G-5,08**

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Type: MVSTB(R/W) 2,5/...-ST-5,08 with MSTBW 2,5/...-G-5,08

1792870 MVSTBW 2,5/14-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	Screw terminal points

15 Approvals

UL Recognized 				
Use group	B	D		
mm ² /AWG/kcmil	30-12	30-12		
Voltage	300 V	300 V		
Current	15 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	30-12	30-12		
Voltage	300 V	300 V		
Current	15 A	10 A		

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

1792870 MVSTBW 2,5/14-ST-5,08CSA 

Use group	B	D		
mm ² /AWG/kcmil	28-12	28-12		
Voltage	300 V	300 V		
Current	10 A	10 A		

EAC cULus Recognized 

1792870 MVSTBW 2,5/14-ST-5,08**16 Commercial Data**

Order No.	1792870
Type	MVSTBW 2,5/14-ST-5,08
Pieces per package	50
Net weight	28.814 g
GTIN	4017918045302
	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
1735769	MSTBW 2,5/14-G-5,08
1755859	MSTBVA 2,5/14-G-5,08
1757365	MSTBA 2,5/14-G-5,08
1758131	MSTBV 2,5/14-G-5,08
1759130	MSTB 2,5/14-G-5,08
1762486	MDSTB 2,5/14-G1-5,08
1762622	MDSTBV 2,5/14-G1-5,08
1767494	SMSTBA 2,5/14-G-5,08
1768066	MSTBA 2,5/14-G-5,08-LA
1769586	SMSTB 2,5/14-G-5,08
1808586	MSTBV 2,5/14-GEH-5,08
1859632	EMSTBVA 2,5/14-G-5,08
1880423	EMSTBA 2,5/14-G-5,08
1898952	DFK-MSTBA 2,5/14-G-5,08
1899252	DFK-MSTBVA 2,5/14-G-5,08

18 Accessories

Description	Order No.	Type
	0805412	SK 5,08/3,8:UNBEDRUCKT
	0804293	SK 5,08/3,8:FORTL.ZAHLEN
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm	1051993	B-STIFT
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
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB

1792870 MVSTBW 2,5/14-ST-5,08

19 Combination tests

**MVSTBW 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

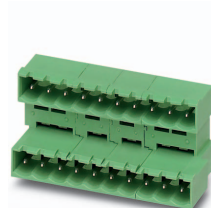
Test sequence 3: noxious gas storage
(ISO 6988)Rated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage
Voltage waveform $\geq (50/60 \text{ Hz})$ **Environmental and endurance tests (E)**

Specification

Degree of protection

**MDSTB 2,5/...-G**

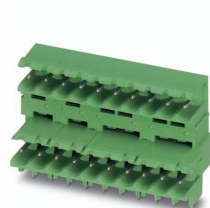
IEC 61984

**MDSTBA 2,5/...-G**

IEC 61984

**MDSTBV 2,5/...-G**

IEC 61984

**MDSTBW 2,5/...-G**

IEC 61984

approx. 8 N / 6 N

Test passed

Test passed

2.8 m Ω

25

2.8 m Ω

4.8 kV

2.21 kV

> 20 G Ω

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

approx. 8 N / 6 N

Test passed

Test passed

2.7 m Ω

25

2.8 m Ω

4.8 kV

2.21 kV

> 65 G Ω

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

approx. 8 N / 6 N

Test passed

Test passed

3.8 m Ω

25

3.7 m Ω

4.8 kV

2.21 kV

> 1 G Ω

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

approx. 8 N / 6 N

Test passed

Test passed

2.8 m Ω

25

2.8 m Ω

4.8 kV

2.21 kV

> 0.2 T Ω

12

2.5 mm²

10 A

Test passed

-40 °C/2 h

100 °C/168 h

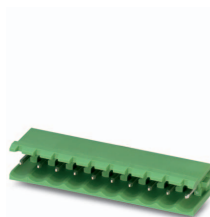
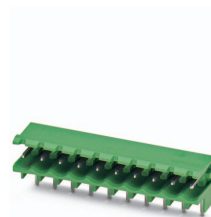
0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

4.8 kV

2.21 kV

IEC 61984:2008-10

Finger safety with IP20
test finger

1792870 MVSTBW 2,5/14-ST-5,08**MVSTBW 2,5/..-ST****MSTB 2,5/..-G****MDSTBVA 2,5/..-G****MSTBW 2,5/..-G**

Specification

IEC 61984

IEC 61984

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

Polarization when inserted
Requirement >20 N

Test passed

Test passed

Test passed

Contact holder in insert
Requirements >20 N

Test passed

Test passed

Test passed

Durability tests (B)Contact resistance R_1 2.6 m Ω 3.7 m Ω 2.2 m Ω

Insertion/withdrawal cycles

25

25

25

Contact resistance R_2 2.6 m Ω 3.7 m Ω 2.3 m Ω Rated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$

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

Insulation resistance
Requirements > 5 M Ω > 0.2 T Ω > 0.1 T Ω > 0.2 T Ω **Thermal tests (C)**

Tested number of positions

24

12

24

Tested conductor cross section

2.5 mm²2.5 mm²2.5 mm²

Test current

12 A

10 A

12 A

Upper limiting temperature
Requirements < 100°C

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

Test sequence 2: heat storage

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

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

Environmental and endurance tests (E)

Specification

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 finger