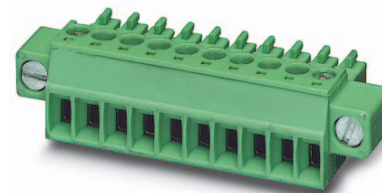


# Data sheet

Order No.: 1847217

Type: MC 1,5/11-STF-3,5

Plug component, Screw connection with tension sleeve



The figure shows a 10-position version of the product

## 1 Main features



- |                           |                                      |                        |                     |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos.             | 11                                   | • Nominal current      | 8 A                 |
| • Conductor cross section | 1.5 mm <sup>2</sup>                  | • Nominal voltage      | 160 V               |
| • Color                   | green                                | • Connection direction | 0°                  |
| • Pitch                   | 3.5 mm                               | • Type of packaging    | packed in cardboard |
| • Connection method       | Screw connection with tension sleeve |                        |                     |

## 2 Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors
- ✓ Screwable flange for superior mechanical stability



Make sure you always use the latest documentation.

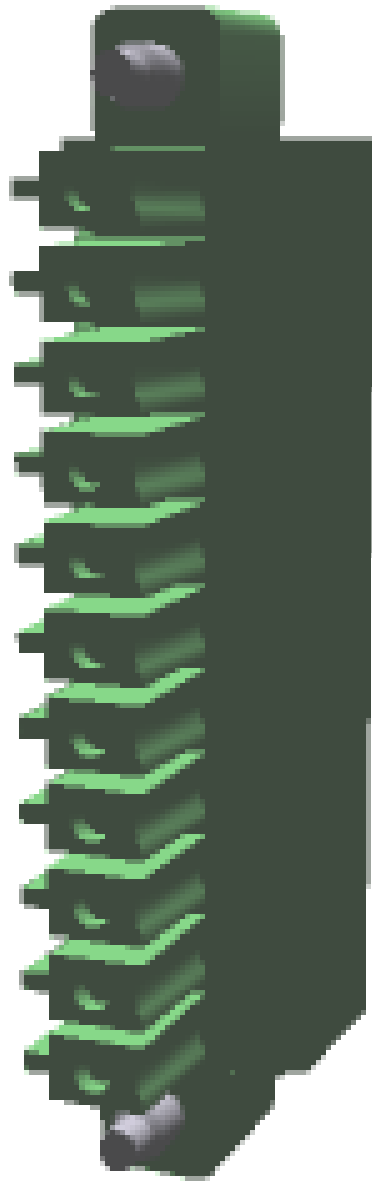
It can be downloaded at: [phoenixcontact.net/product/1847217](https://phoenixcontact.net/product/1847217)

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1847217 MC 1,5/11-STF-3,5

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



**1847217 MC 1,5/11-STF-3,5****5 item properties**

Order No.	1847217
Type	MC 1,5/11-STF-3,5
Type of contact	Female connector
Range of articles	MC 1,5/..-STF
Pitch	3.5 mm
Number of positions	11
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M2
Tightening torque	0.22 Nm ... 0.25 Nm
Locking	Screw flange

**5.1 Connection capacity**

Conductor cross section, solid	0.14 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
Conductor cross section, flexible	0.14 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil	28 to 16
2 conductors with same cross section, solid	0.08 mm <sup>2</sup> to 0.5 mm <sup>2</sup>
2 conductors with same cross section, stranded	0.08 mm <sup>2</sup> to 0.75 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> to 0.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> to 0.34 mm <sup>2</sup>
2 conductors with same cross section, stranded, with TWIN ferrules with plastic sleeve	0.5 mm <sup>2</sup> to 0.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	7 mm

**5.2 Material data**

<b>Material of metal parts</b>		
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	
<b>Insulating material data</b>		
Insulating material	Housing	Housing
CTI according to IEC 60112	PA	
Flammability rating according to UL 94	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**

**1847217 MC 1,5/11-STF-3,5**

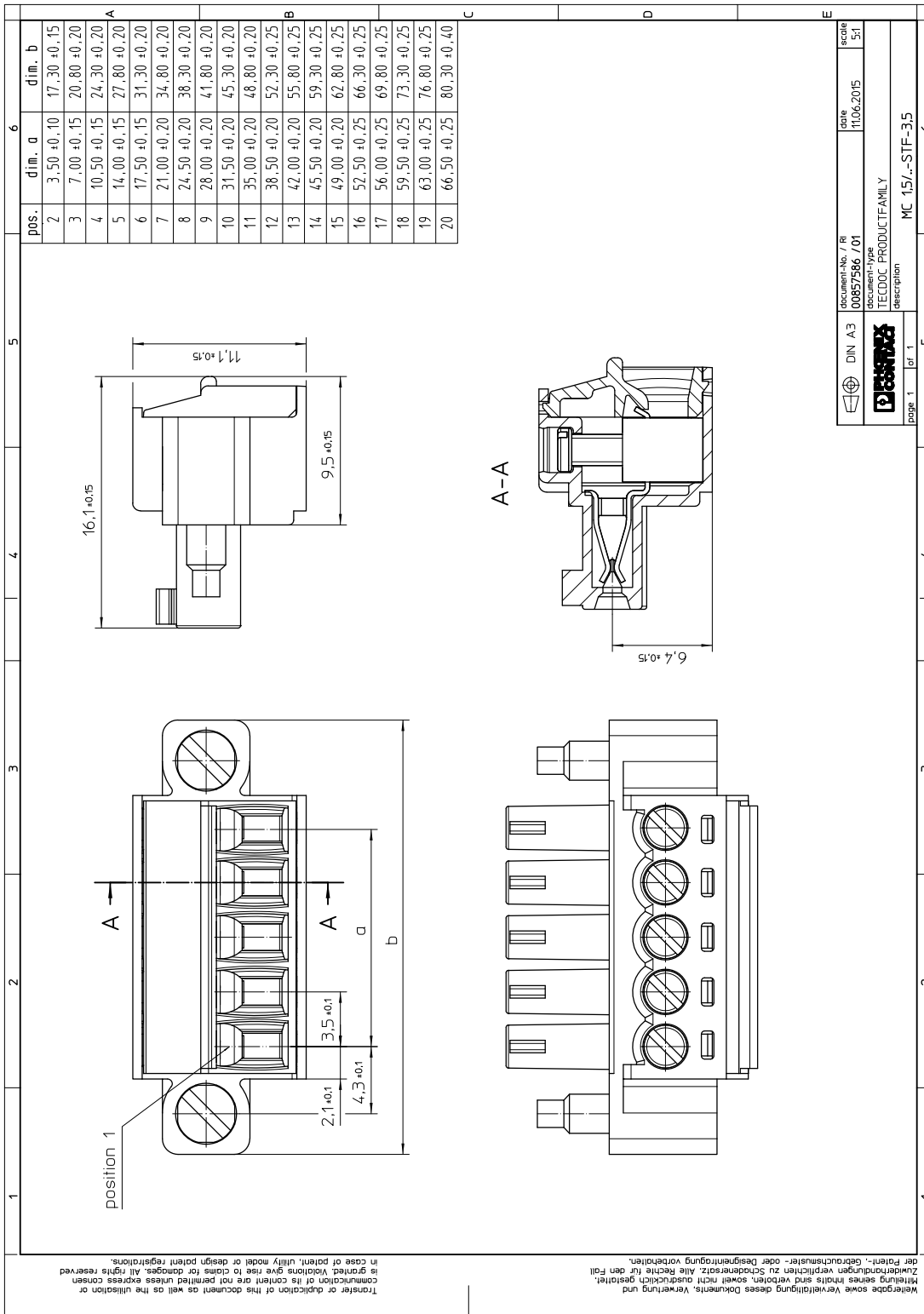
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**6.1 Dimensions for the product**

Length	16.1 mm
Width	48.8 mm
Total height	11.1 mm
Dimension a	35 mm

1847217 MC 1,5/11-STF-3,5

7 Series drawing



**1847217 MC 1,5/11-STF-3,5****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)

**1847217 MC 1,5/11-STF-3,5****10 Mechanical tests**

Mechanical test group A	
Specification	IEC 61984:2008-10
Visual examination	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.	6 N
Withdraw strength per pos. approx.	4 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.	24.5 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	0.14 mm <sup>2</sup> / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.14 mm <sup>2</sup> / stranded / > 10 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm <sup>2</sup> / solid / > 40 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm <sup>2</sup> / stranded / > 40 N



**1847217 MC 1,5/11-STF-3,5****11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	8 A / 1.5 mm <sup>2</sup>
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	1.3 mΩ
Degree of pollution	2

**11.2 Air and creepage distances**

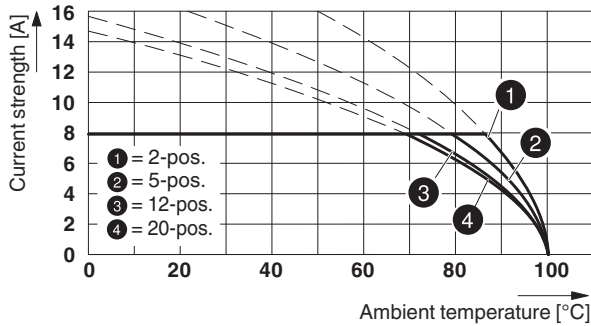
Component	Plug component		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	160 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	1.5 mm	1.5 mm	1.5 mm
Minimum value of the creepage path requirement in acc. with table	2 mm	1.5 mm	1.6 mm

1847217 MC 1,5/11-STF-3,5

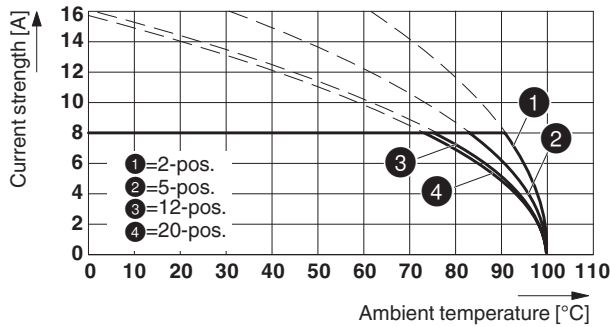
12 Current carrying capacity/derating curves

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	1.5 mm <sup>2</sup>

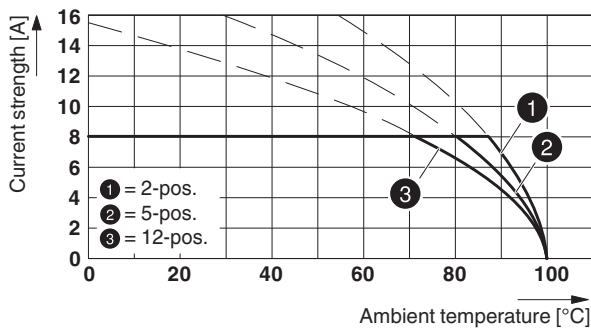
Type: MC 1,5/...-STF-3,5 with MC 1,5/...-GF-3,5

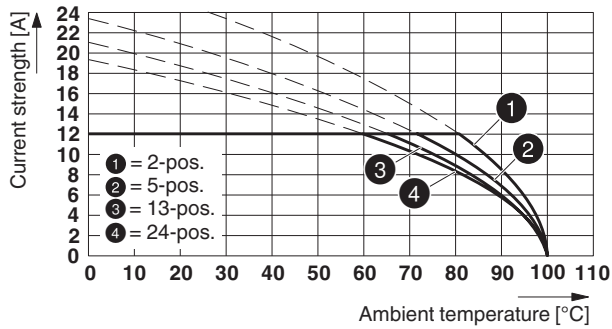


Type: MC 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5



Type: MC 1,5/...-ST(F)-3,5 with MCV 1,5/...-G(F)-3,5 P... THR



**1847217 MC 1,5/11-STF-3,5****Type: MC 1,5/...-ST(F)-3,5 with MC 1,5/...-G(F)-3,5 P... THR****Type: MC 1,5/...-STF-3,5 with MCV 1,5/...-GSF-3,5 P26 THT**

96354\_1000\_en

## 1847217 MC 1,5/11-STF-3,5

## 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

CSA 				
Use group	B	D		
mm <sup>2</sup> /AWG/kcmil	28-16	28-16		
Voltage	300 V	300 V		
Current	8 A	8 A		
VDE Gutachten mit Fertigungsüberwachung 				
mm <sup>2</sup> /AWG/kcmil	0.2-1.5			
Voltage	160 V			
Current	8 A			
IECEE CB Scheme 				
mm <sup>2</sup> /AWG/kcmil	0.2-1.5			
Voltage	160 V			
Current	8 A			
CCA				
mm <sup>2</sup> /AWG/kcmil	0.2-1.5			
Voltage	160 V			
Current	8 A			

**1847217 MC 1,5/11-STF-3,5**

cULus Recognized 

Use group	B	D		
mm <sup>2</sup> /AWG/kcmil	30-14	30-14		
Voltage	300 V	300 V		
Current	8 A	8 A		

EAC 

**1847217 MC 1,5/11-STF-3,5****16 Commercial Data**

Order No.	1847217
Type	MC 1,5/11-STF-3,5
Pieces per package	50
Net weight	8.264 g
GTIN	4017918113513
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**17 corresponding headers**

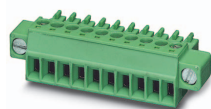
Order No.	Type
1780846	MCV 1,5/11-GF-3,5 P20 THRR72
1789342	MC 1,5/11-GF-3,5 P26 THR
1789355	MC 1,5/11-GF-3,5 P26 THRR72
1789575	MC 1,5/11-GF-3,5 P20 THRR72
1789782	MC 1,5/11-GF-3,5 P14 THR
1789795	MC 1,5/11-GF-3,5 P14 THRR72
1843318	MCV 1,5/11-GF-3,5
1843884	MC 1,5/11-GF-3,5
1897335	EMC 1,5/11-GF-3,5
1911253	EMCV 1,5/11-GF-3,5

**18 Accessories**

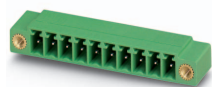
Description	Order No.	Type
	0804073	SK 3,5/2,8:FORTL.ZAHLEN
Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip	1205037	SZS 0,4X2,5 VDE

## 1847217 MC 1,5/11-STF-3,5

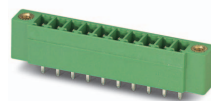
## 19 Combination tests



MC 1,5/...-STF



MC 1,5/...-GF



MCV 1,5/...-GF



MCV 1,5/...-GF-THR



MC 1,5/...-GF-THR

Specification	IEC 61984	IEC 61984	IEC 61984	IEC 61984
<b>Mechanical tests (A)</b>				
Insertion/withdrawal force per position	approx. 6 N / 4 N	approx. 6 N / 5 N	approx. 6 N / 4 N	approx. 8 N / 5 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
<b>Durability tests (B)</b>				
Contact resistance R <sub>1</sub>	1.3 mΩ	1.8 mΩ	1.2 mΩ	1.3 mΩ
Insertion/withdrawal cycles	25	25	25	25
Contact resistance R <sub>2</sub>	1.4 mΩ	2.2 mΩ	1.3 mΩ	1.3 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	2.95 kV	2.95 kV	2.95 kV	2.95 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	1.39 kV	1.39 kV	1.39 kV	1.39 kV
Insulation resistance Requirements > 5 MΩ	1.6 TΩ	10 <sup>12</sup> Ω	> 1 TΩ	> 4 TΩ
<b>Thermal tests (C)</b>				
Tested number of positions	20	20	12	20
Tested conductor cross section	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>
Test current	8 A DC	8 A DC	8 A DC	8 A
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed	Test passed
<b>Climatic tests (D)</b>				
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 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	2.95 kV	2.95 kV	2.95 kV	2.95 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	1.39 kV	1.39 kV	1.39 kV	1.39 kV
<b>Environmental and endurance tests (E)</b>				
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 finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger

**1847217 MC 1,5/11-STF-3,5****MC 1,5/..-STF**

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 $\Omega$ **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

**MCV 1,5/..-GSF**

Specification IEC 61984

approx. 8 N / 5 N

Test passed

Test passed

1.2 m $\Omega$ 

25

1.2 m $\Omega$ 

2.95 kV

1.39 kV

> 9 T $\Omega$ 

12

1.5 mm<sup>2</sup>

8 A DC

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm<sup>3</sup> SO<sub>2</sub> on 300 dm<sup>3</sup>/  
40 °C/1 cycle

2.95 kV

1.39 kV

IEC 61984:2008-10

Finger safety with IP20  
test finger