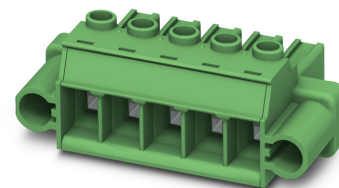


Item No.: 1777859

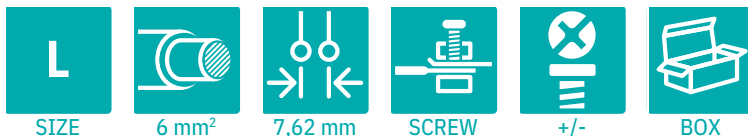
Type: PC 5/ 4-STF1-7,62

PCB connector, Screw connection with tension sleeve



The figure shows a 5-pos. version of the product

## 1 Main features



- |                           |                                      |                        |                     |
|---------------------------|--------------------------------------|------------------------|---------------------|
| • No. of pos.             | 4                                    | • Nominal current      | 32 A                |
| • Conductor cross section | 6 mm <sup>2</sup>                    | • Nominal voltage      | 1000 V              |
| • Color                   | green (RAL 6021)                     | • Connection direction | 0 °                 |
| • Pitch                   | 7.62 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
- ✓ Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- ✓ 600 V UL approval in the smallest of dimensions
- ✓ Screwable flange for superior mechanical stability



Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.com/product/1777859](https://phoenixcontact.com/product/1777859)

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1777859 PC 5/ 4-STF1-7,62

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



**1777859 PC 5/ 4-STF1-7,62****5 General Technical Data****5.1 item properties**

Item no.	1777859
Type	PC 5/ 4-STF1-7,62
Product line	COMBICON Connectors L
Connector system	COMBICON PC 5
Product type	PCB connector
Contact connection type	Socket
Range of articles	PC 5/..-STF1
Pitch	7.62 mm
Number of positions	4
Number of rows	1
Number of connections	4
Number of potentials	4
Connection method	Screw connection with tension sleeve
Screw thread	M3
Drive form screw head	Slotted Phillips recess (H1L)
Connection direction of the conductor to plug-in direction	0 °
Type	Standard

1777859 PC 5/ 4-STF1-7,62

## 6 Mounting method

### 6.1 Flange mounting

Type of locking	Screw locking mechanism
Mounting flange	Screw flange
Tightening torque	0.3 Nm ... 0.7 Nm

**1777859 PC 5/ 4-STF1-7,62****7 Conductor connection****7.1 Connection capacity**

Nominal cross section	6 mm <sup>2</sup>
Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, stranded, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross section flexible with TWIN ferrule and plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.4 mm
Stripping length	10 mm
Tightening torque	0.5 Nm ... 0.8 Nm ( $\leq 4 \text{ mm}^2$ is 0.5 Nm to 0.6 Nm, $> 4 \text{ mm}^2$ is 0.7 Nm to 0.8 Nm)

**7.2 Connection capacity AWG**

Conductor cross section AWG	24 ... 10
-----------------------------	-----------

**1777859 PC 5/ 4-STF1-7,62****8 Material properties****8.1 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	Tin (4 - 8 µm Sn)
	Tin (4 - 8 µm Sn)
Surface characteristics	hot-dip tin-plated

**8.2 Material of plastic parts**

	Housing
Color	green (RAL 6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
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

**1777859 PC 5/ 4-STF1-7,62**

## 9 Dimensions

### 9.1 Dimensions for the product

Length	35.5 mm
Width	45.71 mm
Total height	19.7 mm



**1777859 PC 5/ 4-STF1-7,62****11 Product notes****11.1 General information**

Notes on operation

In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.

**12 Packaging specifications**

Type of packaging

packed in cardboard

Packing unit

50

**13 Application****13.1 Temperature limit values**

Ambient temperature (storage/transport)

-40 °C ... 70 °C

Relative humidity (storage/transport)

30 % ... 70 %

Ambient temperature (assembly)

-5 °C ... 100 °C

Ambient temperature (operation)

-40 °C ... 100 °C (dependent on the derating curve)

**1777859 PC 5/ 4-STF1-7,62****14 General tests****14.1 Specification**

Specification	IEC 61984
Specification	IEC 60999-1
Brief description	PCB connector

**15 Mechanical tests****15.1 Check for damage to conductor or loosening**

Result	Test passed
Specification	IEC 60999-1:1999-11

**15.2 Pull-out test**

Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm <sup>2</sup> / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.2 mm <sup>2</sup> / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	10 mm <sup>2</sup> / solid / > 90 N
Conductor cross section/conductor type/tractive force actual value	6 mm <sup>2</sup> / flexible / > 80 N
Conductor cross section/conductor type/tractive force actual value	6 mm <sup>2</sup> / solid / > 80 N
Conductor cross section/conductor type/tractive force actual value	4 mm <sup>2</sup> / flexible / > 60 N

**15.3 Torque test**

Specification	IEC 60999-1:1999-11
Result	Test passed

**15.4 Visual examination**

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

**15.5 Dimensional test**

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

**15.6 Resistance of marking**

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

**15.7 Polarization and coding**

**1777859 PC 5/ 4-STF1-7,62**

Polarization when inserted  
Requirement >20 N

Test passed

Specification

IEC 60512-13-5:2006-02

**1777859 PC 5/ 4-STF1-7,62****16 Insertion and withdrawal forces**

Insertion and withdrawal force	
Specification	Test passed
No. of cycles	IEC 60512-13-2:2006-02
Insertion strength per pos. approx.	50
Withdraw strength per pos. approx.	8 N
	6.5 N

**1777859 PC 5/ 4-STF1-7,62****17 Electrical tests**

Rated current / conductor cross section	32 A / 6 mm <sup>2</sup>
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Contact resistance	0.4 mΩ
Degree of pollution	2

**1777859 PC 5/ 4-STF1-7,62****18 Air and creepage distances**

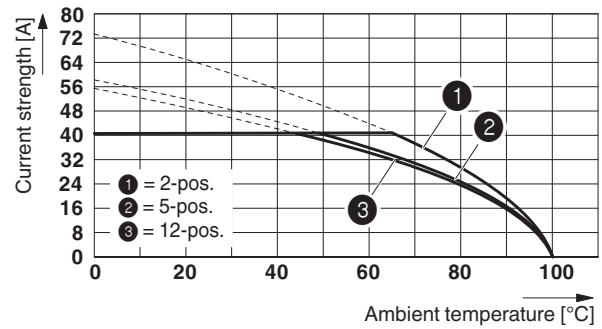
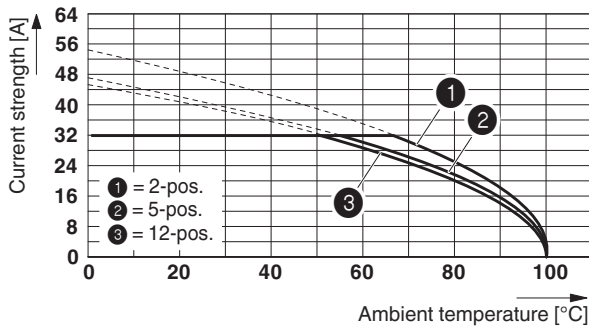
Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112)	CTI 600		
Rated insulation voltage	1000 V	1000 V	1000 V
Rated surge voltage	8 kV	8 kV	6 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	8 mm	8 mm	5.5 mm
Minimum value of the creepage path requirement in acc. with table	12.5 mm	8 mm	5.5 mm

1777859 PC 5/ 4-STF1-7,62

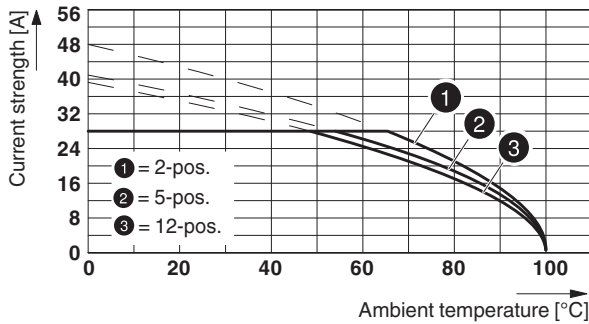
19 Current carrying capacity/derating curves

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	6 mm <sup>2</sup>

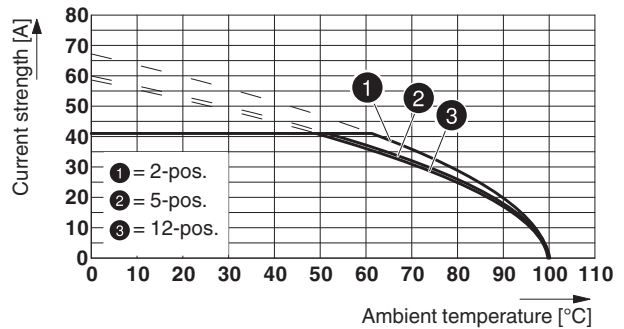
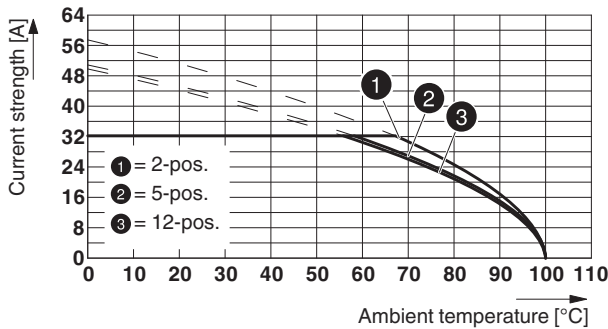
Type: PC 5/...-STF1-7,62 with PC 5/...-GF-7,62  
 Conductor cross section: 6 mm<sup>2</sup>



Type: PC 5/...-STF1-7,62 with PCV 4/...-G-7,62 and BF-PC 4  
 Conductor cross section: 4 mm<sup>2</sup>

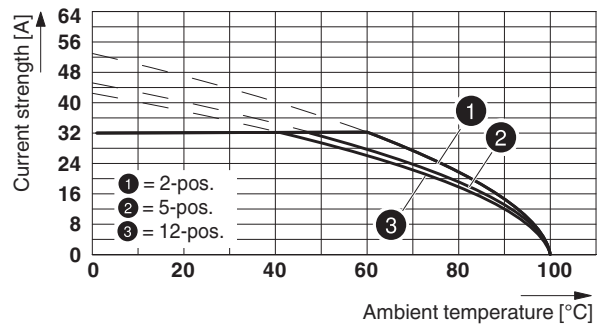
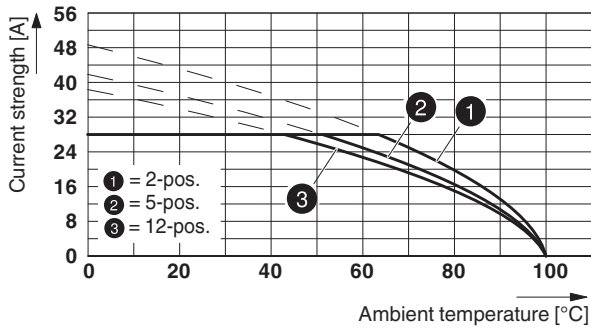


Type: PC 5/...-ST(F)1-7,62 with PC 5/...-GU(F)-7,62  
 Conductor cross section: 6 mm<sup>2</sup>

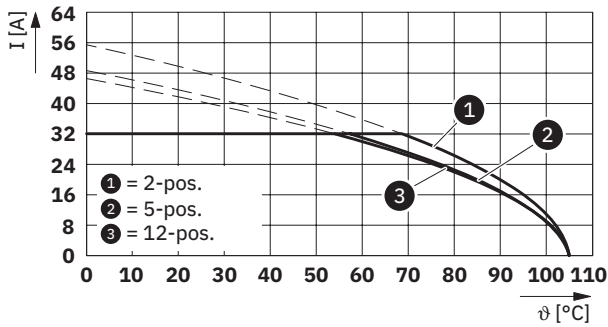


1777859 PC 5/ 4-STF1-7,62

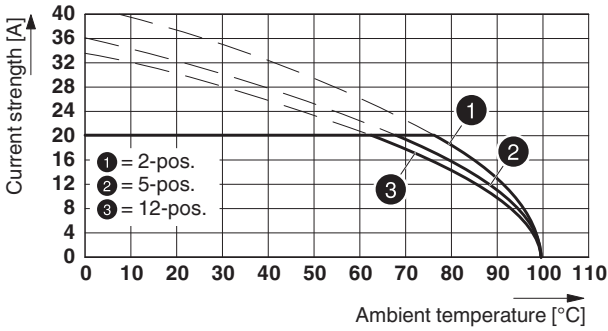
Type: PC 5/...-STF1-7,62 with PC 4/...-G-7,62 and BF-PC 4  
 Conductor cross section: 4 mm<sup>2</sup>



Type: PC 5/...-STF1-7,62 with PCV 5/...-GF-7,62



Type: PC 5/...-STF1-7,62 with PCVK 4-7,62 and PCVK 4-7,62-F



**1777859 PC 5/ 4-STF1-7,62****20 Environmental and durability tests****20.1 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 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Note	The connecting cables must be strain relieved.

**20.2 Insulation resistance**

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	$>10^{12} \Omega$

**1777859 PC 5/ 4-STF1-7,62****21 Type approval and special tests****21.1 Shock testing**


Specification	IEC 60068-2-27:2008-02
Result	Test passed
Pulse shape	Semi-sinusoidal
Peak acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

**22 Classification for connectors**

Specification	IEC 61984:2008-10
Main features	Connectors without switching capacity (COC)
	Fixed connectors
Strain relief elements	without strain relief
Connection method	Can be reconnected
Protection against electric shock	not encapsulated - back of hand safety when plugged in
Protective conductor	without PE
Locking	no
Connection method	Screw terminal points

## 1777859 PC 5/ 4-STF1-7,62

**23 Approvals / Certificates**

cULus Recognized 	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
Multi-conductor connection	600 V	41 A	24 - 12	-
Screw connection	600 V	41 A	24 - 8	-
<b>Usegroup C</b>				
Multi-conductor connection	600 V	41 A	24 - 12	-
Screw connection	600 V	41 A	24 - 8	-

**1777859 PC 5/ 4-STF1-7,62****24 Commercial Data**

Item no.	1777859
Type	PC 5/ 4-STF1-7,62
Packing unit	50
Net weight	20.226 g
GTIN	4046356522991
	Information that applies locally, see link on page 1

**25 corresponding headers**

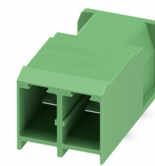
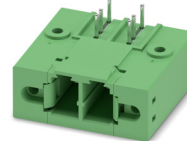
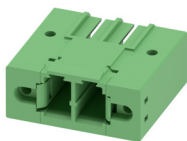
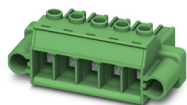
Item no.	Type
1716632	DFK-PC 5/ 4-STF-7,62
1720819	PC 5/ 4-GF-7,62
1721038	PC 5/ 4-GFU-7,62
1720929	PCV 5/ 4-GF-7,62

**26 Accessories**

Description	Item No.	Type
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, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red	1701967	CP-PC RD
	0804549	SK 7,62/3,8:FORTL.ZAHLEN
	0825128	SK 3,8 REEL P7,62 WH CUS
	0803906	SK U/3,8 WH:UNBEDRUCKT
	0805218	SK 3,8 WH:REEL

## 1777859 PC 5/ 4-STF1-7,62

## 27 Combination tests

**PC 5/..-STF1**

IEC 61984

**PC 5/..-GF**

IEC 61984

**PCV 4/..-G**

IEC 61984

**PC 5/..-GFU**

IEC 61984

**PC 4/..-G**

IEC 61984

**Mechanical tests (A)**

Insertion/withdrawal force per position	approx. 8 N / 6.5 N	approx. 8 N / 6 N	approx. 7 N / 4 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 <sub>1</sub> 1st level	0.4 mΩ	0.45 mΩ	0.4 mΩ	0.45 mΩ
Contact resistance R <sub>1</sub> 2nd level				
Insertion/withdrawal cycles	50	50	50	50
Contact resistance R <sub>2</sub>	0.5 mΩ	0.6 mΩ	0.4 mΩ	0.6 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	7.3 kV	7.3 kV	7.3 kV	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV	3.31 kV	3.31 kV
Insulation resistance Requirements > 5 MΩ	>10 <sup>12</sup> Ω	>10 <sup>12</sup> Ω	> 5 MΩ	>10 <sup>12</sup> Ω

**Thermal tests (C)**

Tested number of positions	12	12	12	12
Tested conductor cross section	6 mm <sup>2</sup>	4 mm <sup>2</sup>	6 mm <sup>2</sup>	4 mm <sup>2</sup>
Test current	32 A	28 A	32 A	28 A
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed	Test passed

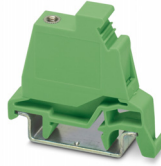
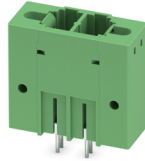
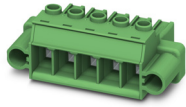
**Climatic tests (D)**

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	100 °C/168 h	100 °C/168 h	100 °C/168 h
Test sequence 3: noxious gas storage	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)	7.3 kV	7.3 kV	7.3 kV	7.3 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV	3.31 kV	3.31 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	Back of hand safety with IP10 access probe	Finger safety with IP20 test finger	Back of hand safety with IP10 access probe	Back of hand safety with IP10 access probe

## 1777859 PC 5/ 4-STF1-7,62

**PC 5/..-STF1**

IEC 61984

**PCV 5/..-GF**

IEC 61984

**PCVK 4-F**

IEC 61984

**Mechanical tests (A)**

Insertion/withdrawal force per position	approx. 9 N / 5 N	approx. 7 N / 4 N		
Polarization when inserted Requirement >20 N	Test passed	Test passed		
Contact holder in insert Requirements >20 N	Test passed	Test passed		

**Durability tests (B)**

Contact resistance R <sub>1</sub> 1st level	0.5 mΩ	0.9 mΩ		
Contact resistance R <sub>1</sub> 2nd level				
Insertion/withdrawal cycles	25	25		
Contact resistance R <sub>2</sub>	0.5 mΩ	1 mΩ		
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	7.3 kV	7.3 kV		
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV		
Insulation resistance Requirements > 5 MΩ	> 5 MΩ	> 5 MΩ		

**Thermal tests (C)**

Tested number of positions	12	12		
Tested conductor cross section	6 mm <sup>2</sup>	4 mm <sup>2</sup>		
Test current	32 A	20 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	105 °C/168 h	100 °C/168 h		
Test sequence 3: noxious gas storage	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)	7.3 kV	7.3 kV		
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	3.31 kV	3.31 kV		

**Environmental and endurance tests (E)**

Specification	IEC 61984:2008-10	IEC 61984:2008-10		
Degree of protection	Back of hand safety with IP10 access probe	Finger safety with IP20 test finger		