Table 9 – Additional CLEARANCES for insulation in circuits CONDUCTIVELY CONNECTED TO THE MAINS with peak WORKING VOLTAGES exceeding the peak value of the nominal a.c. MAINS voltage and between such circuits and circuits not CONDUCTIVELY CONNECTED TO THE MAINS

Nominal a.c. MAINS voltage ≤ 150 V		Nominal a.c. MAINS voltage > 150 V ≤ 300 V	Additional CLEARANCE mm	
Pollution degrees 1 and 2	Pollution degree 3	Pollution degrees 1, 2 and 3	BASIC or SUPPLEMENTARY INSULATION	REINFORCED INSULATION
Maximum WORKING VOLTAGE V (peak)	Maximum WORKING VOLTAGE V (peak)	Maximum WORKING VOLTAGE V (peak)		
210 (210)	210 (210)	420 (420)	0	0
298 (288)	294 (293)	493 (497)	0,1	0,2
386 (366)	379 (376)	567 (575)	0,2	0,4
474 (444)	463 (459)	640 (652)	0,3	0,6
562 (522)	547 (541)	713 (729)	0,4	0,8
650 (600)	632 (624)	787 (807)	0,5	1,0
738 (678)	715 (707)	860 (884)	0,6	1,2
826 (756)	800 (790)	933 (961)	0,7	1,4
914 (839)		1 006 (1 039)	0,8	1,6
1 002 (912)		1 080 (1 116)	0,9	1,8
1 090 (990)		1 153 (1 193)	1,0	2,0
		1 226 (1 271)	1,1	2,2
		1 300 (1 348)	1,2	2,4
		– (1 425)	1,3	2,6

The values in parentheses shall be used when the values in parentheses in Table 8 are used in accordance with note 2 of Table 8.

For WORKING VOLTAGES above those shown in the table, linear extrapolation is allowed.

Linear interpolation between the nearest two points is permitted, the calculated spacing being rounded up to the next higher 0,1 mm increment.

For an explanation of the pollution degrees, see 13.1.

13.3.3 CLEARANCES in circuits not CONDUCTIVELY CONNECTED TO THE MAINS

CLEARANCES in circuits not CONDUCTIVELY CONNECTED TO THE MAINS shall comply with the minimum dimensions of Table 10.

For an WORKING VOLTAGE to be used in determining CLEARANCES for circuits not CONDUCTIVELY CONNECTED TO THE MAINS in accordance with Table 10:

– the peak value of any superimposed ripple on a d.c. voltage which exceeds that permitted in 2.3.3, shall be included; and
– the peak value shall be used for non-sinusoidal voltages.

Circuits not CONDUCTIVELY CONNECTED TO THE MAINS will normally be overvoltage category I if the MAINS is overvoltage category II; the maximum transients in overvoltage category I for various a.c. MAINS voltages are shown in the column headings of Table 10. However, a floating circuit not CONDUCTIVELY CONNECTED TO THE MAINS in an apparatus that has anywhere a connector (for example antenna, signal input) that could be earthed, shall be subjected to the requirements for circuits CONDUCTIVELY CONNECTED TO THE MAINS in Tables 8 and 9 unless it is in apparatus with a PROTECTIVE EARTHING TERMINAL and either

– the floating circuit is separated from the circuit CONDUCTIVELY CONNECTED TO THE MAINS by an earthed metal screen; or

– transients on the circuit not CONDUCTIVELY CONNECTED TO THE MAINS are below the permitted maximum value for overvoltage category I (for example due to being attenuated by connecting a component, such as a capacitor, between the circuit not CONDUCTIVELY CONNECTED TO THE MAINS and earth). See 13.3.4 for the method of measuring the transient level.

If the TELECOMMUNICATION NETWORK TRANSIENT VOLTAGE is known, the known value should be used.

If the TELECOMMUNICATION NETWORK TRANSIENT VOLTAGE is not known, an assumed transient rating of 800 V (peak) should be used for TNV-2 CIRCUITS and 1,5 kV (peak) for TNV-1 CIRCUITS and TNV-3 CIRCUITS.

If it is known that the incoming transients are attenuated within the apparatus, the value to be used should be determined in accordance with 13.3.4 b).

Table 10 – Minimum CLEARANCES in circuits not CONDUCTIVELY CONNECTED TO THE MAINS

CLEARANCES in millimetres

WORKING VOLTAGE up to and including		Nominal a.c. MAINS voltage ≤ 150 V (transient rating for circuits not CONDUCTIVELY CONNECTED TO THE MAINS 800 V) [b]				Nominal a.c. MAINS voltage > 150 V ≤ 300 V (transient rating for circuits not CONDUCTIVELY CONNECTED TO THE MAINS 1 500 V) [b]				Nominal a.c. MAINS voltage > 300 V ≤ 600 V (transient rating for circuits not CONDUCTIVELY CONNECTED TO THE MAINS 2 500 V) [b]		Circuits not subject to transient overvoltages [a]	
Voltage peak or d.c.	Voltage r.m.s. sinu-soidal	Pollution degrees 1 and 2		Pollution degree 3		Pollution degrees 1 and 2		Pollution degree 3		Pollution degrees 1, 2 and 3		Pollution degrees 1 and 2 only	
V	V	B/S	R	B/S	R	B/S	R	B/S	R	B/S	R	B/S	R
71	50	0,7	1,4	1,3	2,6	1,0	2,0	1,3	2,6	2,0	4,0	0,4	0,8
		(0,2)	(0,4)	(0,8)	(1,6)	(0,5)	(1,0)	(0,8)	(1,6)	(1,5)	(3,0)	(0,2)	(0,4)
140	100	0,7	1,4	1,3	2,6	1,0	2,0	1,3	2,6	2,0	4,0	0,7	1,4
		(0,2)	(0,4)	(0,8)	(1,6)	(0,5)	(1,0)	(0,8)	(1,6)	(1,5)	(3,0)	(0,2)	(0,4)
210	150	0,9	1,8	1,3	2,6	1,0	2,0	1,3	2,6	2,0	4,0	0,7	1,4
		(0,2)	(0,4)	(0,8)	(1,6)	(0,5)	(1,0)	(0,8)	(1,6)	(1,5)	(3,0)	(0,2)	(0,4)
280	200	B/S 1,4 (0,8) R 2,8 (1,6)								2,0	4,0	1,1	2,2
										(1,5)	(3,0)	(0,2)	(0,4)
420	300	B/S 1,9 (1,0) R 3,8 (2,0)								2,0	4,0	1,4	2,8
										(1,5)	(3,0)	(0,2)	(0,4)
700	500	B/S 2,5 R 5,0											
840	600	B/S 3,2 R 5,0											
1 400	1 000	B/S 4,2 R 5,0											
2 800	2 000	B/S/R 8,4 [c]											
7 000	5 000	B/S/R 17,5 [c]											
9 800	7 000	B/S/R 25 [c]											
14 000	10 000	B/S/R 37 [c]											
28 000	20 000	B/S/R 80 [c]											
42 000	30 000	B/S/R 130 [c]											

The values in the table are applicable to BASIC INSULATION (B), SUPPLEMENTARY INSULATION (S) and REINFORCED INSULATION (R).

The values in parentheses are applicable to BASIC INSULATION, SUPPLEMENTARY INSULATION or REINFORCED INSULATION only if manufacturing is subjected to a quality control programme (an example for such a programme is given in Annex M). In particular, DOUBLE and REINFORCED INSULATION shall be subjected to ROUTINE TESTS for dielectric strength.

For WORKING VOLTAGES between 420 V (peak) or d.c. and 42 000 V (peak) or d.c., linear interpolation is permitted between the nearest two points, the calculated spacing being rounded up to the next higher 0,1 mm increment. For WORKING VOLTAGES exceeding 42 000 V (peak) or d.c., linear extrapolation is permitted, the calculated spacing being rounded up to the next higher 0,1 mm increment.

For explanation of the pollution degrees, see 13.1.

For lower transient voltages, Table F.2 of IEC 60664-1:2007 may be used.

a The values are applicable to d.c. circuits not CONDUCTIVELY CONNECTED TO THE MAINS which are reliably connected to earth and have capacitive filtering which limits the peak-to-peak ripple to 10 % of the d.c. voltage.

b Where transients in the apparatus exceed this value, the appropriate higher CLEARANCE shall be used.

c For WORKING VOLTAGES above 1 400 V peak or 1 000 V r.m.s., the minimum CLEARANCE is 5 mm provided that the CLEARANCE path passes an electric strength test according to 10.4.2 using:

– an a.c. test voltage whose r.m.s. value is 106 % of the peak WORKING VOLTAGE; or

– a d.c. test voltage equal to 150 % of the peak WORKING VOLTAGE.

If the CLEARANCE path is partly along the surface of a material that is not material group I, the dielectric strength test is conducted across the air gap only.

13.3.4 Measurement of transient voltages

The following tests are conducted only where it is required to determine whether or not transient voltages across the CLEARANCE in any circuit are lower than normal, due, for example, to the effect of a filter in the apparatus. The transient voltage across the CLEARANCE is measured using the following test procedure, and the CLEARANCE shall be based on the measured value.

During the tests, the apparatus is connected to its separate SUPPLY APPARATUS, if any, but is not connected to the MAINS, nor to any network, for example TELECOMMUNICATION NETWORKS, and any surge suppressors in circuits CONDUCTIVELY CONNECTED TO THE MAINS are disconnected.

A voltage measuring device is connected across the CLEARANCE in question.

a) Transients due to MAINS overvoltages

To measure the reduced level of transients due to MAINS overvoltages, the impulse test generator of Annex K is used to generate 1,2/50 μs impulses, with U_c equal to the MAINS *transient voltage given in the column headings of Table 8.*

Three to six impulses of alternating polarity, with intervals of at least 1 s between impulses, are applied between each of the following points where relevant:

- *line-to-line;*
- *all line conductors joined together and neutral;*
- *all line conductors joined together and protective earth; and*
- *neutral and protective earth.*

b) Transients due to TELECOMMUNICATION NETWORK overvoltages

To measure the reduced level of transients due to TELECOMMUNICATION NETWORK overvoltages, the impulse test generator of Annex K is used to generate 10/700 μs impulses, with U_c equal to the TELECOMMUNICATION NETWORK TRANSIENT VOLTAGE.

If the TELECOMMUNICATION NETWORK TRANSIENT VOLTAGE is not known for the TELECOMMUNICATION NETWORK in question, it shall be taken as

- *1 500 V_{peak} if the circuit connected to the TELECOMMUNICATION NETWORK is a TNV-1 CIRCUIT or a TNV-3 CIRCUIT; and*
- *800 V_{peak} if the circuit connected to the TELECOMMUNICATION NETWORK is a TNV-0 CIRCUIT or a TNV-2 CIRCUIT.*

Three to six impulses of alternating polarity, with intervals of at least 1 s between impulses, are applied between each of the following TELECOMMUNICATION NETWORK connection points:

- *each pair of TERMINALS (for example, A and B or tip and ring) in an interface;*
- *all TERMINALS of a single interface type joined together and earth.*

13.4 CREEPAGE DISTANCES

CREEPAGE DISTANCES shall be not less than the appropriate minimum values specified in Table 11, taking into account the value of the WORKING VOLTAGE, the pollution degree and the material group.

If the CREEPAGE DISTANCE derived from Table 11 is less than the applicable CLEARANCE as determined in 13.3 or Annex J, then the value for that CLEARANCE shall be applied for the minimum CREEPAGE DISTANCE.

It is permitted to use minimum CREEPAGE DISTANCES equal to the applicable CLEARANCES for glass, mica, ceramic or similar materials.

For the WORKING VOLTAGE to be used in determining CREEPAGE DISTANCES:

– the actual r.m.s. or d.c. value shall be used;

  If the r.m.s. value is measured, care shall be taken that measuring instruments give true r.m.s. readings of non-sinusoidal waveforms as well as sinusoidal waveforms.

– if the d.c. value is used, any superimposed ripple shall not be taken into account;

– short-term conditions (for example, cadenced ringing signals in TNV CIRCUITS) shall not be taken into account; and

– short-term disturbances (for example transients) shall not be taken into account.

When determining the WORKING VOLTAGE for a TNV CIRCUIT connected to a TELECOMMUNICATION NETWORK whose characteristics are not known, the normal WORKING VOLTAGES shall be assumed to be the following values:

– 60 V d.c. for TNV-1 CIRCUITS;

– 120 V d.c. for TNV-2 CIRCUITS and TNV-3 CIRCUITS.

Material groups are classified as follows:

Material group I	600 ≤ CTI (comparative tracking index)
Material group II	400 ≤ CTI < 600
Material group IIIa	175 ≤ CTI < 400
Material group IIIb	100 ≤ CTI < 175

The material group is verified by evaluation of the test data for the material according to IEC 60112 using 50 drops of solution A.

If the material group is not known, material group IIIb shall be assumed. If a CTI of 175 or greater is needed, and the data is not available, the material group can be established with a test for proof tracking index (PTI) as detailed in IEC 60112. A material may be included in a group if its PTI established by these tests is equal to, or greater than, the lower value of the CTI specified for the group.

Table 11 – Minimum CREEPAGE DISTANCES

CREEPAGE DISTANCES *in millimetres*

WORKING VOLTAGE up to and including	BASIC and SUPPLEMENTARY INSULATION						
	Pollution degree 1	Pollution degree 2			Pollution degree 3		
	Material group	Material group			Material group		
V r.m.s. or d.c.	I, II, IIIa or IIIb	I	II	IIIa or IIIb	I	II	IIIa or IIIb
10	[a]	0,4	0,4	0,4	1,0	1,0	1,0
12,5		0,42	0,42	0,42	1,05	1,05	1,05
16		0,45	0,45	0,45	1,1	1,1	1,1
20		0,48	0,48	0,48	1,2	1,2	1,2
25		0,5	0,5	0,5	1,25	1,25	1,25
32		0,53	0,53	0,53	1,3	1,3	1,3
40		0,56	0,8	1,1	1,4	1,6	1,8
50		0,6	0,85	1,2	1,5	1,7	1,9
63		0,63	0,9	1,25	1,6	1,8	2,0
80		0,67	0,9	1,3	1,7	1,9	2,1
100		0,71	1,0	1,4	1,8	2,0	2,2
125		0,75	1,05	1,5	1,9	2,1	2,4
160		0,8	1,1	1,6	2,0	2,2	2,5
200		1,0	1,4	2,0	2,5	2,8	3,2
250		1,25	1,8	2,5	3,2	3,6	4,0
320		1,6	2,2	3,2	4,0	4,5	5,0
400		2,0	2,8	4,0	5,0	5,6	6,3
500		2,5	3,6	5,0	6,3	7,1	8,0
630		3,2	4,5	6,3	8,0	9.0	10
800		4,0	5,6	8,0	10	11	12,5
1 000		5,0	7,1	10	12,5	14	16
1 250		6,3	9,0	12,5	16	18	20
1 600		8,0	11	16	20	22	25
2 000		10	14	20	25	28	32
2 500		12,5	18	25	32	36	40
3 200		16	22	32	40	45	50
4 000		20	28	40	50	56	63
5 000		25	36	50	63	71	80
6 300		32	45	63	80	90	100
8 000		40	56	80	100	110	125
10 000		50	71	100	125	140	160
12 500		63	90	125			
16 000		80	110	160			
20 000		100	140	200			
25 000		125	180	250			
32 000		160	220	320			
40 000		200	280	400			
50 000		250	360	500			
63 000		320	450	600			

Linear interpolation is permitted between the nearest two points, the calculated spacing being rounded to the next higher 0,1 mm increment.

For REINFORCED INSULATION, the values for CREEPAGE DISTANCE are twice the values for BASIC INSULATION in this table. In case of interpolation, rounding is done after the doubling.

For explanation of the pollution degrees, see 13.1.

[a] No minimum CREEPAGE DISTANCES are specified for insulation in pollution degree 1. The minimum CLEARANCES apply, as determined in 13.3 or Annex J.

Compliance is checked by measurement, taking into account Annex E.

The following conditions are applicable.

Movable parts are placed in their most unfavourable positions.

For apparatus incorporating ordinary non-detachable power supply cords, CREEPAGE DISTANCE measurements are made with supply conductors of the largest cross-sectional area specified in 15.3.5, and also without conductors.

When measuring CREEPAGE DISTANCES from an enclosure of insulating material through a slot or opening in the enclosure, the ACCESSIBLE surface is considered to be conductive as if it were covered by metal foil wherever it can be touched by the test finger, according to test probe B of IEC 61032:1997 (see 9.1.1.3), applied without appreciable force (see Figure 3, point B).

NOTE The presence of adhesive on insulation tapes might have an influence on the CTI.

13.5 PRINTED BOARDS

13.5.1 The minimum CLEARANCES and CREEPAGE DISTANCES between conductors, one of which may be CONDUCTIVELY CONNECTED TO THE MAINS, on PRINTED BOARDS complying with the pull-off and peel strength requirements of the relevant part of IEC 60249-2 are given in Figure 10, and for which the following applies:

– these distances only apply as far as overheating is concerned (see 11.2) to the conductors themselves, not to mounted components or associated solder connections; and
– coatings of lacquer or the like, except coatings according to IEC 60664-3, are ignored when measuring the distances.

13.5.2 For type B coated PRINTED BOARDS, insulation between conductors shall comply with the requirements of IEC 60664-3. This applies only to BASIC INSULATION.

NOTE 1 For such PRINTED BOARDS, CLEARANCES and CREEPAGE DISTANCES under the coating do not exist.

NOTE 2 For multilayer printed board constructions, see 2.10.6.4 and Table 2R of IEC 60950-1:2005.

13.6 Jointed insulation

Distances between conductive parts along uncemented joints shall be considered as CLEARANCES and CREEPAGE DISTANCES for which the values of 13.3 or Annex J and 13.4 apply.

For reliably cemented joints, complying with the following tests, CLEARANCES and CREEPAGE DISTANCES do not exist. In this case only 8.8 applies.

Compliance is checked by inspection, measurement and test.

For this test, enamelled winding wires, if any, are replaced by uninsulated wires.

The materials are considered to be cemented together, if they withstand the following test.

Three apparatus, components or subassemblies are subjected 10 times to the following temperature cycle:

– *68 h at (X ± 2)* °C,
– *1 h at (25 ± 2)* °C,
– *2 h at (0 ± 2)* °C,
– *1 h at (25 ± 2)* °C,

whereby X is the highest temperature measured under normal operating conditions on the apparatus, component or subassembly under consideration plus 10 K with a minimum of 85 °C.

One apparatus, component or subassembly is subjected to the relevant dielectric strength test of 10.4, without the humidity treatment of 10.3, however, the test voltage is multiplied by 1,6.

This test is performed immediately after the 68 h temperature conditioning of the last cycle.

Upon conclusion of the complete number of cycles, the two remaining apparatus, components or subassemblies are subjected to the relevant dielectric strength test of 10.4; however, the test voltages are multiplied by 1,6.

NOTE The test voltage is higher than the normal test voltage in order to ensure that, if the surfaces are not cemented together, a breakdown occurs.

For transformers, magnetic couplers and similar devices, if insulation is relied upon for safety, a voltage of 500 V r.m.s. at a frequency of 50 Hz or 60 Hz is applied between windings, and also between windings and other conductive parts, during the thermal cycling condition above.

No evidence of insulation breakdown shall occur during this test.

13.7 Enclosed and sealed parts

For apparatus, subassemblies or components, not CONDUCTIVELY CONNECTED TO THE MAINS and which are enclosed, enveloped or hermetically sealed against ingress of dirt and moisture, the minimum internal CLEARANCES and CREEPAGE DISTANCES may be reduced to the values as given in Table 12.

NOTE Examples of such constructions include hermetically sealed metal boxes, adhesive sealed plastic boxes, parts enveloped in a dip coat or by type A coatings according to IEC 60664-3 of PRINTED BOARDS.

Table 12 – Minimum CLEARANCES and CREEPAGE DISTANCES (enclosed, enveloped or hermetically sealed constructions)

WORKING VOLTAGE up to and including V (peak) a.c. or V d.c.	Minimum CLEARANCES and CREEPAGE DISTANCES mm
35	0,2
45	0,2
56	0,3
70	0,3
90	0,4
110	0,4
140	0,5
180	0,7
225	0,8
280	1,0
360	1,1
450	1,3
560	1,6
700	1,9
900	2,3
1 120	2,6
1 400	3,2
1 800	4,2
2 250	5,6
2 800	7,5
3 600	10,0
4 500	12,5
5 600	16,0
7 000	20,0
9 000	25,0
11 200	32,0
14 000	40,0
The values are applicable to both BASIC INSULATION and SUPPLEMENTARY INSULATION. The values for REINFORCED INSULATION shall be twice the values in the table. A minimum CTI (comparative tracking index) of 100 is required for the insulating materials used. The CTI rating refers to the value obtained in accordance with IEC 60112, solution A. Linear interpolation between the nearest two points is allowed, the calculated spacing being rounded to the next higher 0,1 mm increment.	

Compliance is checked by inspection, measurement and by subjecting the apparatus, subassembly or component 10 times to the following temperature cycle:

– *68 h at (Y ± 2) °C,*
– *1 h at (25 ± 2) °C,*
– *2 h at (0 ± 2) °C,*
– *1 h at (25 ± 2) °C,*

whereby Y is the highest temperature measured under normal operating conditions of the apparatus, subassembly or component under consideration, with a minimum of 85 °C. In case of transformers, Y is the highest winding temperature measured under normal operating conditions, plus 10 K, with a minimum of 85 °C.

The apparatus, subassembly or component is then subjected to the dielectric strength test of 10.4.

The tests are carried out on three samples.

No failure is allowed.

13.8 The distances between conductive parts internal to apparatus, subassemblies or components which are treated with insulating compound filling all voids, so that CLEARANCES and CREEPAGE DISTANCES do not exist, shall be subject only to the requirements of 8.8.

NOTE Examples of such treatment include potting, encapsulation and vacuum impregnation.

Compliance is checked in accordance with 13.7, taking into account 8.8 together with the following:

A visual inspection shall be carried out to determine that there are no cracks in the encapsulating, impregnating or other material, that coatings have not loosened or shrunk, and after sectioning the sample, that there are no significant voids in the material.

14 Components

14.1 General

Where components are part of a range of values it is usually not necessary to test every value within that range. If this range of values consists of several technologically homogeneous subranges, the samples should be representative of each of these subranges. Moreover, it is recommended, where possible, to make use of the concept of structurally similar components.

When a certain flammability category according to IEC 60695-11-10 is required, reference is made to Annex G with respect to alternative test methods.

When no flammability requirements are specified in Clause 14, the requirements of 20.2.5 apply.

〖C〗 *Text deleted* 〖C〗

14.2 Resistors

Resistors, the short-circuiting or disconnecting of which would cause an infringement of the requirements for operation under fault conditions (see Clause 11) and resistors bridging contact gaps of MAINS SWITCHES, shall have an adequate stable resistance value under overload.

Such resistors shall be positioned inside the enclosure of the apparatus.

Compliance is checked by test a) or test b), carried out on a sample of 10 specimens.

Before test a) or b), the resistance of each sample is measured and the sample is then subjected to the damp heat test according to IEC 60068-2-78 with the following severity parameters:

– *Temperature: (40 ± 2) °C,*
– *Humidity: (93 ± 3) % RH,*
– *Test duration: 21 days.*

a) For resistors connected between HAZARDOUS LIVE parts and ACCESSIBLE conductive parts and for resistors bridging contact gaps of MAINS SWITCHES, the 10 specimens are each subjected to 50 discharges at a maximum rate of 12/min, from a 1 nF capacitor charged to 10 kV in a test circuit as shown in Figure 5a.

After this test, the value of resistance shall not differ more than 20 % from the value measured before the damp heat test.

No failure is allowed.

b) For other resistors, the 10 specimens are each subjected to a voltage of such a value that the current through it is 1,5 times the value measured through a resistor, having a resistance equal to the specified rated value, which is fitted to the apparatus, when operated under fault conditions. During the test the voltage is kept constant.

The value of resistance is measured when steady state is attained and shall not differ more than 20 % from the value measured before the damp heat test.

No failure is allowed.

For resistors connected between HAZARDOUS LIVE parts and ACCESSIBLE conductive parts, the CLEARANCES and CREEPAGE DISTANCES between the terminations shall comply with the requirements of Clause 13 for REINFORCED INSULATION.

Resistors with internal end-lead terminations are allowed only if the internal spacings are clearly and precisely defined.

Compliance is checked by measurement and inspection.

14.3 Capacitors and RC-units

14.3.1 Where reference is made to the tests specified in Table 9 of IEC 60384-14:2005, these tests are supplemented as follows:

The duration of the damp heat steady-state test as specified in 4.12 of IEC 60384-14:2005 shall be 21 days.

NOTE Reference is made to IEC 60384-14 irrespective of whether the capacitor or RC-unit is used for electromagnetic interference suppression purposes or not.

14.3.2 Capacitors or RC-units, the short-circuiting or disconnecting of which would cause an infringement of the requirements under fault conditions with regard to electric shock hazard shall:

a) withstand the tests for subclass Y2 or Y4 capacitors or RC-units as specified in Table 9 of IEC 60384-14:2005.

Subclass Y2 capacitors or RC-units shall be used for apparatus with rated MAINS voltages > 150 V and ≤ 250 V with respect to earth or neutral respectively.

Subclass Y4 capacitors or RC-units may be used only for apparatus with rated MAINS voltages ≤ 150 V with respect to earth or neutral respectively.

b) withstand the tests for subclass Y1 or Y2 capacitors or RC-units as specified in Table 9 of IEC 60384-14:2005.

Subclass Y1 capacitors or RC-units shall be used for apparatus with rated MAINS voltages > 150 V and ≤ 250 V with respect to earth or neutral respectively.

Subclass Y2 capacitors or RC-units may be used only for apparatus with rated MAINS voltages ≤ 150 V with respect to earth or neutral respectively.

NOTE For the application of a) and b), reference is made to 8.5 and 8.6.

Such capacitors or RC-units shall be positioned inside the enclosure of the apparatus.