Test Report issued under the responsibility of:

SGS Fimko Ltd.

TEST REPORT
IEC 60335-2-80
Safety of household and similar electrical appliances
Part 2 : Particular requirements for fans

Report Number..... :	GZES191102722702A1
Date of issue..... :	2019-12-23 Amendment No. 1: 2020-04-28
Total number of pages ..... :	76
Name of Testing Laboratory preparing the Report ..... :	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch
Applicant's name ..... :	Foshan Shunde Kinworld Electrical Co., Ltd.
Address..... :	**Building No.2, Delong Industrial Park, No.12, Wenhai Middle Road, Ronggui, Shunde, Foshan, 528305 Guangdong, China**
Test specification:	
Standard ..... :	IEC 60335-2-80:2015 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011, AMD1:2013, AMD2:2016
Test procedure..... :	CB Scheme
Non-standard test method..... :	N/A
Test Report Form No. ..... :	IEC60335_2_80I
Test Report Form(s) Originator.... :	LCIE
Master TRF ..... :	Dated 2017-09

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	Fan
Trade Mark .....:	--
Manufacturer.....:	Same as applicant
Model/Type reference .....:	FE-23A, FE-30, FE-35, FE-40, FE-45, FE-45A, FE-50, FE-50A, FES-45C, FES-45D, FES-50C, FES-45, FES-40, FES-50, FE-23, FE-40A, FE-40B, FE-45B, FE-50B, FES-45B, FES-45A, FE-50D, FE-45D, FE-40D, FE-35D, FE-30D, FE-25D, FE-45F, FZ-30M
Ratings.....:	**For temperate climates:** 220 V – 240 V; 50 Hz; Class I; FE-23A: 40 W FE-23: 48 W FE-30: 55 W; FE-35, FE-40A, FE-40B, FE-45B: 70 W; FE-40, FE-45, FE-45A, FES-45D, FES-45, FES-40, FES-45B: 100 W; FE-50, FE-50A, FES-45C, FES-50C, FES-50: 120 W; FE-50B: 140W **For tropical climates:** 220 V – 240 V; 50 Hz / 60 Hz; T; Class I; FE-23: 48 W FE-30, FE-30D: 55 W; FE-35, FE-40A, FE-40B, FE-35D: 70 W; FE-25D, FZ-30M: 80 W; FE-40, FES-45D, FE-45, FE-45A, FES-45, FES-40, FES-45B, FES-45A, FE-40D: 100 W; FE-50, FE-50A, FES-45C, FES-50C, FES-50, FE-45D, FE-50D, FE-45F: 120 W; FE-50B: 140W Below models were subjected for 50Hz only; 220 V – 240 V; 50 Hz; T; Class I; FE-45B: 70 W;

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch	
Testing location/ address ..... :		Building 1, European Industrial Park, No.1, Shunhe South Road, Wusha, Daliang, Shunde District, Foshan, Guangdong, China	
Tested by (name, function, signature) ..... :		Jason Li / Raina Chen / Project Engineer	Jason Li
Approved by (name, function, signature) .. :		Leo Huang / Reviewer	
☐	**Testing procedure: CTF Stage 1:**	N/A	
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 2:**	N/A	
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature). :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 3:**	N/A	
☐	**Testing procedure: CTF Stage 4:**	N/A	
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature). :			
Approved by (name, function, signature) .. :			
Supervised by (name, function, signature) :			

List of Attachments (including a total number of pages in each attachment):

Attachment 2 including 6 pages of EN 60335-1: 2012 / A1: 2019+ A14: 2019+A2: 2019;
Attachment 3 including 1 pages of Circuit diagram;
Attachment 4 including 19 pages of Photo document;
Attachment 5 including 7 pages of Australia And New Zealand Differences.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Tests according to the following standards were carried out: IEC 60335-2-80: 2015 IEC 60335-1: 2010 + A1: 2013 + A2: 2016 After reviewed, the model FES-45C was subjected to clause 11, 13, 15, 19.11, 19.12, 30 and construction check. Other models were subjected to construction check. Tests of clause 10, 11 and 13 are carried out at 40 ± 2℃. The submitted samples fulfil the requirements of above standards.	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch Building 1, European Industrial Park, No.1, Shunhe South Road, Wusha, Daliang, Shunde District, Foshan, Guangdong, China

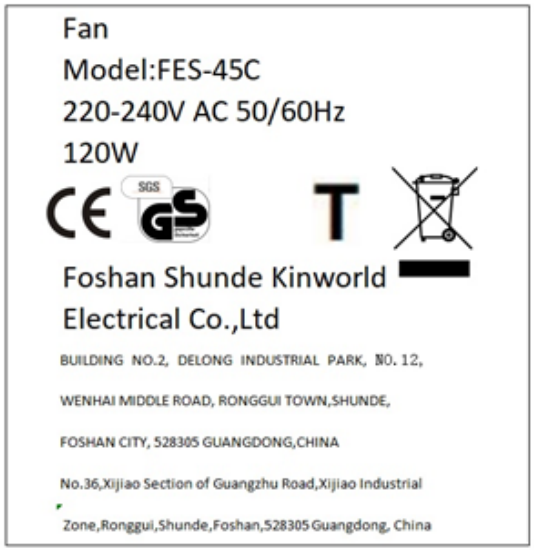
Summary of compliance with National Differences (List of countries addressed):

EU Group Differences, National differences of AU, NZ and DE.
AU=Australia, NZ= New Zealand, DE=Germany
EK decisions according to German ProdSG have been taken into account.
PAH risk evaluation according to AfPS GS 2019:01 PAK.

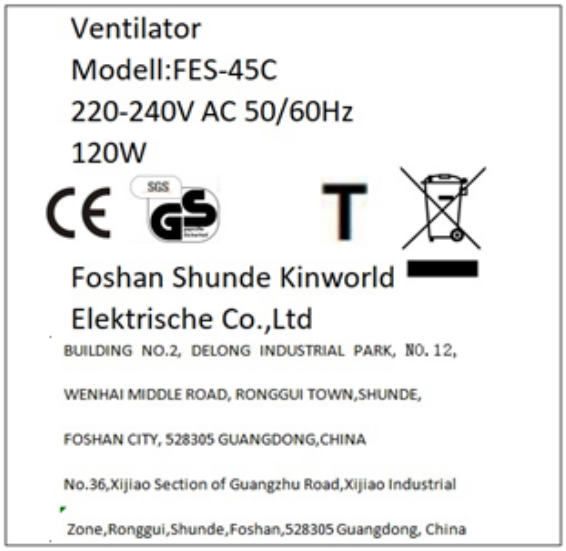
☒ **The product fulfils the requirements of:**
EN 60335-2-80: 2003 + A1: 2004 + A2: 2009
EN 60335-1: 2012 + A11: 2014 + A13: 2017 + A1: 2019 + **A14: 2019 + A2: 2019**
EN 62233: 2008
AS/NZS 60335.2.80: 2016
AS/NZS 60335.1: 2011 + A1: 2012 + A2: 2014 + A3: 2015 + A4: 2017 + A5: 2019

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



English



German

Remark:
Other marking plates are the same as the above one except for the model number and rated power.

1. The Height of CE logo shall not be less than 5 mm; Height of WEEE logo shall not be less than 7 mm;

2. As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

3. Marking on the packaging or in a document accompanying the electrical equipment is only acceptable if it is not possible to place such markings on the product.

Test item particulars ..... :	
Classification of installation and use ..... :	Portable appliance for household and indoor used
Supply Connection ..... :	Non-detachable cord fitted with a plug
..... :	
Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing .....:	
Date of receipt of test item.....:	2020-04-03
Date (s) of performance of tests .....:	2020-04-03 to 2020-04-09

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
The report GZES191102722702A1 is invalid if without report No. GZES191102722701.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	☒ **Yes** ☐ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) .....:	Foshan Shunde Kinworld Electrical Co., Ltd. **Address 1: Building No.2, Delong Industrial Park, No.12, Wenhai Middle Road, Ronggui, Shunde, Foshan, 528305 Guangdong, China** **Address 2: 36 Xijiao Section of Guangzhu Road, Xijiao Industrial Zone, Ronggui, Shunde, Foshan, 528305 Guangdong, China**

General product information and other remarks:

Portable appliance is intended for household and indoor use.

See the following table for model differences:

Below table was for temperate climates:

FE-23A, FE-23, FE-30, FE-35, FE-40A, FE-40B, FE-45B, FE-40, FE-45, FE-45A, FES-45D, FES-45, FES-40, FES-45B, FE-50, FE-50A, FES-45C, FES-50C, FES-50, FE-50B

Below table was for tropical climates:

FE-23, FE-30, FE-30D, FE-35, FE-40A, FE-40B, FE-35D, FE-25D, FZ-30M, FE-40, FES-45D, FE-45, FE-45A, FES-45, FES-40, FES-45B, FES-45A, FE-40D, FE-50, FE-50A, FES-45C, FES-50C, FES-50, FE-45D, FE-50D, FE-45F, FE-50B

Model No.	Rated power (W)	Motor	Motor running capacitor	Size of fan blade	Control mode	Placement mode	Appearance
FE-23A	40	ME-23	1,5 μF	9'' Aluminum	Rotary switch	Table	
FE-23	48	ME-30	1,5 μF	9'' Aluminum	Rotary switch	Table	Same as FE-23A
FE-30	55	ME-30	1,5 μF	12" Aluminum	Push-button switch	Table	
FE-30D	55	ME-30	1,5 μF	12" Aluminum	Push-button switch	Table	
FE-25D	80	ME-35	1,5 μF	10'' Aluminum	Rotary switch	Table or Floor	
FZ-30M	80		1,5 μF	10'' Aluminum	Rotary switch	Table or Floor	identical to FE-25D except model name
FE-35	70		1,5 μF	14" Aluminum	Push-button switch	Table	
FE-35D	70			14" Aluminum	Push-button switch	Table	
FE-40A, FE-40B	70			16" Three-leaf plastic	Push-button switch	Table	
FE-45B	70			18" Three-leaf plastic	Push-button switch	Table	Same as FE-40A
FE-40	100	ME-40	2,0 μF	16" Aluminum	Push-button switch	Table	Same as FE-45
FE-40D	100			16"	Push-	Table	

				Aluminum	button switch		
FES-40	100			16” Aluminum	Push-button switch	Floor	Same as FES-50
FE-45, FE-45A	100			18” Aluminum	Push-button switch	Table	
FE-45A (alternative fan blade)	100			18” Three-leaf plastic	Push-button switch	Table	
FES-45	100			18” Aluminum	Push-button switch	Floor	Same as FES-50
FES-45A	100			18” Five-leaf plastic	Push-button switch	Floor	
FES-45D	100			18” Aluminum	Electronic switch	Floor	Same as FES-50C
FES-45B	100			18” Five-leaf plastic	Push-button switch	Floor	
FE-50, FE-50A	120	ME-50	2,0 µF	20” Aluminum	Push-button switch	Table	
FE-50A (alternative fan blade)	120			20” Three-leaf plastic	Push-button switch	Table	
FE-50D	120			20” Aluminum	Push-button switch	Table	
FE-45D	120			18” Aluminum	Push-button switch	Table	
FE-45F	120			18” Aluminum	Push-button switch	Table	
FE-50B	140			20” Three-leaf plastic	Push-button switch	Table	Same as FE-40A
FES-50	120			20” Aluminum	Push-button switch	Floor	
FES-50C	120			20” Aluminum	Electronic switch	Floor	
FES-45C	120			18” Aluminum	Electronic switch	Floor	Same as FES-50C
Remark: FE-40A is the same as FE-40B except for the model number. FE-45A is the same as FE-45 except for the model number. FE-50A is the same as FE-50 except for the model number.							

Remark 1:
1. Model FE-50B is identical with FE-50, except for material of fan blade.
2. Model FES-50 is identical with FE-50, except for placement mode.

3. Model FES-50C is identical with FE-50, except for placement mode and control mode.
4. Model FES-45C is identical with FES-50C, except for size of fan blade.
5. Model FES-40 is identical with FE-40, except for placement mode.
6. Model FES-45 is identical with FE-45, except for placement mode.
7. Model FES-45D is identical with FE-45, except for control mode and placement mode. Control mode and placement mode are same with FES-50C.
8. Model FES-45B is identical with FE-45, except for fan blade and placement mode.
9. Model FE-40A, FE-40B, FE-45B are identical with FE-35, except for fan blade.
10. Model FE-23 is identical with FE-30, except for fan blade and switch.

Remark 2:
1. Model FES-45A is identical with FE-45A, except for placement mode.
2. Model FE-50D is identical with FE-50, except for fan guard.
3. Model FE-45D, FE-45F is identical with FE-50, except for fan guard and size.
4. Model FE-40D is identical with FE-40, except for fan guard.
5. Model FE-35D is identical with FE-35, except for fan guard.
6. Model FE-30D is identical with FE-30, except for fan guard.
7. Model FE-25D has two optional placement modes, on table or on floor. (Details refer to photo documentation;
8. Model FZ-30M identical to FE-25D except model name.

Amendment-1:
The original test report Ref. No. GZES191102722701, dated 2019-12-23 was modified on 2020-04-28 to include the following additions and changes, which were considered technical modifications:
1. Update EN standard to 'EN 60335-1: 2012 / A14: 2019 + A2: 2019'.
2. Additional alternative stands for FE-30, FE-35, FE-40, FE-50, see photo document for details.
3. Additional alternative control box construction and PCB for FES-45C, see photo document for details.
4. Update address of the applicant, the manufacture and factory, see below table for details:

	In original report	In this report
The applicant and the manufacture address	36 Xijiao Section of Guangzhu Road, Xijiao Industrial Zone, Ronggui, Shunde, Foshan, 528305 Guangdong, China	Building No.2, Delong Industrial Park, No.12, Wenhai Middle Road, Ronggui, Shunde, Foshan, 528305 Guangdong, China
The factory address	36 Xijiao Section of Guangzhu Road, Xijiao Industrial Zone, Ronggui, Shunde, Foshan, 528305 Guangdong, China	Address 1: Building No.2, Delong Industrial Park, No.12, Wenhai Middle Road, Ronggui, Shunde, Foshan, 528305 Guangdong, China Address 2: 36 Xijiao Section of Guangzhu Road, Xijiao Industrial Zone, Ronggui, Shunde, Foshan, 528305 Guangdong, China

5. Additional alternative push-button switch, PVC tube, X2 capacitor, current fuse, PCB, varistor, see table 24.1 for details.
6. Additional Australia and New Zealand standard: AS/NZS 60335.2.80: 2016
AS/NZS 60335.1: 2011 + A1: 2012 + A2: 2014 + A3: 2015 + A4: 2017 + A5: 2019.

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
8	**PROTECTION AGAINST ACCESS TO LIVE PARTS**		—
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
	Lamps are not removed. However, during insertion or removal of lamps, no contact with live parts of the lamp cap. (IEC 60335-2-80)		N/A
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		P
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements or supporting parts		N/A
	For a single switching action obtained by a switching device, requirements as specified		N/A
	For appliances with a supply cord and without a switching device, the single switching action may be obtained by the withdrawal of the plug		N/A
8.1.4	Accessible part not considered live if:		N/A
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V		N/A
	- safety extra-low d.c. voltage: not exceeding 42.4 V		N/A
	- or separated from live parts by protective impedance		N/A
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0.7 mA		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 µF		N/A
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 µC		N/A
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		N/A
	- built-in appliances		N/A
	- fixed appliances		N/A
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
8.2	After removal of detachable parts for user maintenance purposes, the basic insulation of internal wiring may be touched provided the equivalent insulating of cords complying with IEC 60227 or IEC 60245. (IEC 60335-2-80)		P
11	**HEATING**		—
11.1	No excessive temperatures in normal use		P
11.2	The appliance is held, placed or fixed in position as described..... :	Placed on a horizontal support	P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		P
	the windings are non-uniform or it is difficult to make the necessary connections		N/A
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) .... :		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)..... :	1,06 x 240 V = 254,4 V	P
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)..... :		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
11.7	Appliances are operated until steady conditions are established. (IEC 60335-2-80)		P
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 ..... :	(see appended table)	P
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of Annex C are carried out		N/A
	Sealing compound does not flow out		N/A
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
	The temperature rise limits for appliances for tropical climates are reduced by 15 K. (IEC 60335-2-80)		P
	The temperature rise limits for fans marked with an ambient operating temperature are reduced by the difference between the marked value and 25 °C. (IEC 60335-2-80)		N/A
13	**LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE**		—
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times the rated power input (W)..... :		N/A
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V)..... :	1,06 x 240 V = 254,4 V	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
13.2	For class 0, class II and class III appliances, and class II constructions, leakage current measured by means of the circuit described in figure 4 of IEC 60990	Class II construction	P
	For class 0I and class I appliances, a low impedance ammeter may be used	Class I appliances	P
	Leakage current measurements ..... :	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4 ..... :	(see appended table)	P
	No breakdown during the tests		P
15	**MOISTURE RESISTANCE**		—

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance	IPX0	P
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529 ..... :		N/A
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
	The outer part of fans to be installed in the external structure is subjected to subclause 14.2.4(a) of IEC 60529:1989. The part of fans that is not mounted on the outside surface is protected against the spray water from the oscillating tube. (IEC 60335-2-80)		N/A
	The test is carried out with the appliance in the rest position and then in operation while supplied at rated voltage, shutters or similar devices being in the open position. (IEC 60335-2-80)		N/A
	Fans marked with the second numeral of the IP system are subjected to the appropriate test of IEC 60529 both at rest and in operation while supplied at rated voltage. (IEC 60335-2-80)		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		N/A
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N/A
15.2	Spillage of liquid does not affect the electrical insulation		N/A
	Spillage solution comprising water containing approximately 1 % NaCl and 0,6 % rinsing agent		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts are removed		N/A
	Overfilling test with additional amount of the solution, over a period of 1 min (l)..... :		N/A
	The appliance withstands the electric strength test of 16.3		N/A
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.3	Appliances proof against humid conditions		P
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		P
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		N/A
	Humidity test for 48 h in a humidity cabinet	25°C, R.H. 93 %	P
	Reassembly of those parts that may have been removed		N/A
	The appliance withstands the tests of clause 16		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
16	**LEAKAGE CURRENT AND ELECTRIC STRENGTH**		—
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V)..... :	1,06 x 240 V = 254,4 V	P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by √3 (V) ..... :		N/A
	Leakage current measurements ..... :	(see appended table)	P
	Limit values doubled if:		N/A
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified .... :		N/A
16.3	Electric strength tests according to table 7 ..... :	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified ..... :		N/A
	No breakdown during the tests		P
19	**ABNORMAL OPERATION**		—
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless		P
	they comply with the conditions specified in 19.11.1		P
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		N/A
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		P
	During and after each test the following is checked:		P
	- the temperature of the windings do not exceed the values specified in table 8		P
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		N/A
	- the base material of the printed circuit board withstands the test of Annex E		N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		P
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified	After EC3: 1,07 W	P
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit		P
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		P
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N/A
	b) open circuit at the terminals of any component	RV, C6, C7, R13, ZD1, D1, T3, T2, T1, T4: no hazard	P
	c) short circuit of capacitors, unless		N/A
	they comply with IEC 60384-14	C6, C7: no hazard	P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	RV, C6, C7, R13, ZD1, D1, T3, T2, T1, T4: no hazard	P
	This fault condition is not applied between the two circuits of an optocoupler		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	e) failure of triacs in the diode mode	T3, T2, T1, T4: no hazard	P
	f) failure of microprocessors and integrated circuits		N/A
	g) failure of an electronic power switching device		N/A
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		P
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A) ..... :	Rated: 2 A; Measured: 8 A	P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9 ..... :	(see appended table)	P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		P
	- basic insulation (V)..... :	1000 V	P
	- supplementary insulation (V) ..... :	1750 V	P
	- reinforced insulation (V) ..... :	3000 V; 3070,6 V	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A
20	**STABILITY AND MECHANICAL HAZARDS**		—
20.1	Appliances having adequate stability		P
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		N/A
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
	Portable pedestal fans exceeding 1,7 m and exceeding 10 kg tested with a force of 40 N at 1,5 m. (IEC 60335-2-80)		N/A
	20.101 Fan blades, other than those of fans for mounting at high level, shall be guarded unless their leading edges and tips are rounded with a radius of not less than 0,5 mm and (IEC 60335-2-80)		P
	– they have a hardness less than D 60 Shore, or (IEC 60335-2-80)		N/A
	– they have a peripheral speed less than 15 m/s when the fan is supplied at rated voltage, or (IEC 60335-2-80)		N/A
	– the fan has a power output not exceeding 2 W when supplied at rated voltage. (IEC 60335-2-80)		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable, and		P
	have adequate mechanical strength		P
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure		N/A
	Not possible to touch dangerous moving parts with the test probe described		P
20.101	Fan blades, other than those for mounting at high level, shall be guarded, unless their leading edges and tips are rounded with a radius of not less than 0,5 mm and: (IEC 60335-2-80)		P
	-they have a hardness less than D 60 Shore, or (IEC 60335-2-80)		N/A
	-they have a peripheral speed less than 15 m/s when the fan is supplied at rated voltage, or (IEC 60335-2-80)		N/A
	-the fan has a power output not exceeding 2 W when supplied at rated voltage. (IEC 60335-2-80)		N/A
20.102	There shall be no risk of entrapment or injury caused by movement of the oscillating head of pedestal fans or table fans. (IEC 60335-2-80)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Unless the entrapment point is guarded so that it cannot be touched by test probe 18 of IEC 61032, the appliance is operated at rated voltage and test probe 18 is placed at the entrapment point across the width and height of its opening. (IEC 60335-2-80)		N/A
	If test probe 18 is touched by the moving part, it shall not be subjected to a force exceeding 15 N. (IEC 60335-2-80)		N/A
21	**MECHANICAL STRENGTH**		—
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J	(see appended table)	P
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm	(See clause 29.3.1)	P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
21.101	Fan guards are subjected to a push and pull force of 20 N applied along the axis of the motor. Dangerous moving parts are not accessible with a test probe that is similar to test probe B of IEC 61032, but having a circular stop face with a diameter of 50 mm instead of the non-circular face. (IEC 60335-2-80)		P
	The test probe is applied with a force not exceeding 5N. (IEC 60335-2-80)		P
21.102	Ceiling fans have adequate strength. Ceiling fans are mounted in accordance with the installation instructions. A load equal to four times the mass of the fan is suspended from the body of the fan for 1 min. A torque of 1 Nm is then applied to the fixed body of the fan for 1 min. The test is repeated with the torque applied in the reverse direction. The suspension system including any safety suspension system device shall not break and the fan shall not be damaged to such an extent that compliance with 8.1, 16.3 and Clause 29 is impaired. (IEC 60335-2-80)		N/A
22	**CONSTRUCTION**		—
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IPX0	N/A
	NOTE 101 The enclosure defined in IEC 60529 does not include guards for fan blades. (IEC 60335-2-80)		N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		N/A
	- a supply cord fitted with a plug, or		N/A
	- a switch complying with 24.3, or		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		N/A
	- an appliance inlet		N/A
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0.25 Nm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Pull force of 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless		N/A
	rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A
22.5	No risk of electric shock when touching pins, for appliances having a capacitor with rated capacitance equal to or greater than 0,1µF, the appliance being disconnected from the supply at the instant of voltage peak		P
	Voltage not exceeding 34 V (V) ..... :	16 V	P
	If compliance relies on the operation of an electronic circuit, the electromagnetic phenomena tests of 19.11.4.3 and 19.11.4.4 are applied		N/A
	The discharge test is then repeated three times, voltage not exceeding 34 V (V)..... :		N/A
22.6	Electrical insulation not affected by condensing water or leaking liquid		N/A
	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks		N/A
	In case of doubt, test as described		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		P
	the substance has adequate insulating properties		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		P
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		N/A
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		N/A
	The 50 N force is not applied to clips used to fasten fan guards. (IEC 60335-2-80)		P
	Instead, a force of 15 N is applied in any direction to the clips in an attempt to release them. (IEC 60335-2-80)		P
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner, if loosening result in a hazard		P
	Removing or fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible, if resulting in a hazard		P
	A choking hazard does not apply to appliances for commercial use		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		P
	If the part is removed and can be contained within the small parts cylinder, it is considered to be a choking hazard		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operator’s hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P

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Clause	Requirement + Test	Result - Remark	Verdict
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N/A
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported		N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N/A
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N/A
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		N/A
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Ceramic and similar porous material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts, or		N/A
	unearthed metal parts separated from live parts by basic insulation only		N/A
	Electrodes not used for heating liquids		N/A
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances and cordless appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N/A
	they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
	Resistors checked by the test of 14.1 a) in IEC 60065		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P

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Clause	Requirement + Test	Result - Remark	Verdict
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		N/A
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		N/A
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		N/A
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		N/A
	- continuously, or		N/A
	- automatically, or		N/A
	- remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts have at least double insulation or reinforced insulation between live parts and the functionally earthed parts		N/A
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N/A
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		P
22.55	Devices operated to stop the intended function of the appliance, if any, are be distinguished from other manual devices by means of shape, size, surface texture or position ..... :	Position	P
	The requirement concerning position does not preclude use of a push on push off switch		N/A
	An indication when the device has been operated is given by:		P
	– tactile feedback from the actuator or from the appliance, or		P
	– reduction in heat output; or		N/A
	– audible and visible feedback		N/A
22.56	Detachable power supply part provided with the part of class III construction		N/A
22.57	The properties of non-metallic materials do not degrade from exposure to UV-C radiation, as specified in Annex T		N/A
	This requirement does not apply to glass, ceramics or similar materials		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
22.101	Appliances having provision for attaching a luminaire incorporate appropriate terminals and internal wiring. The internal wiring associated with the luminaire shall have insulation at least equivalent to silicone rubber compound type IE2 complying with IEC 60245-3. This requirement is not applicable to fans incorporating a luminaire that cannot be replaced without breaking the appliance. (IEC 60335-2-80)		N/A
22.102	The ceiling fan shall be constructed so that a failure of the fixing device of the motor to the mounting rod could not give rise to risk of injury to the user or surroundings. (IEC 60335-2-80)		N/A
22.102.1	The ceiling fan shall incorporate a device that disconnects the fan from the supply before the suspension system fails. An example of this construction is shown in Figure 101. (IEC 60335-2-80)		N/A
22.102.2	The ceiling fan shall be constructed so that the fan motor and blades do not fall more than 300 mm after failure of the suspension system and the fan shall be disconnected from the supply. An example of this construction is shown in Figure 103. (IEC 60335-2-80)		N/A
22.102.3	The ceiling fan shall be constructed so that the fan blades and motor are connected to the suspension system via a threaded down rod that is locked by means of one or more setscrews. An example of this construction is shown in Figure 104. (IEC 60335-2-80)		N/A
22.102.4	The ceiling fan shall be constructed so that an additional through bolt, lock washer and nut, or the like limits the distance of drop by no more than 75 mm in case of the suspension system failure. An example of this construction is shown in Figure 105. (IEC 60335-2-80)		N/A
22.102.5	The ceiling fan shall be constructed so that all components required to prevent the failure of the suspension system are treated or coated to resist corrosion. Any fixing bolts shall have a minimum diameter of 5 mm and a minimum tensile strength of 200 MPa. Any such bolts shall have provision to prevent them working loose due to vibration. An example of this construction is shown in Figure 106. (IEC 60335-2-80)		N/A
23	**INTERNAL WIRING**		—
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well-rounded or provided with bushings		P

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	Wiring effectively prevented from coming into contact with moving parts		P
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges		N/A
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		P
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		P
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	Fans with an oscillating mechanism influencing wiring, the conductors shall show no damage after 100 000 cycles of flexing at rated voltage and operated under normal operation , the angle being the maximum allowed by the construction (IEC 60335-2-80)		P
	100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		P
	Not more than 10% of the strands of any conductor broken, and		P
	not more than 30% for wiring supplying circuits that consume no more than 15W		N/A
23.4	Bare internal wiring sufficiently rigid and fixed	No bare internal wiring used	N/A
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use		P
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		N/A
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
	For class II construction, the requirements for supplementary insulation and reinforced insulation apply,		P
	except that the sheath of a cord complying with IEC 60227 or IEC 60245 may provide supplementary insulation.		N/A

IEC 60335-2-80			
Clause	Requirement + Test	Result - Remark	Verdict
	A single layer of internal wiring insulation does not provide reinforced insulation		P
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or		N/A
	be such that it can only be removed by breaking or cutting		N/A
23.7	The colour combination green/yellow only used for earthing conductors		N/A
23.8	Aluminium wires not used for internal wiring	No aluminium wires used	P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	**COMPONENTS**		—
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components ..... :	(see appended table)	P
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		P
	Relays tested as part of the appliance, or		N/A
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		N/A
	The requirements of Clause 29 apply between live parts of components and accessible parts of the appliance		P
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard		P
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections		P
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Components that have been previously tested to comply with the resistance to fire requirements in the IEC standard for the relevant component need not be retested provided the specified conditions are met		N/A
	If these conditions are not satisfied, the component is tested as part of the appliance.		P
	Power electronic converter circuits not required to comply with IEC 62477-1, they are tested as part of the appliance		N/A
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N/A
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		P
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, comply with IEC 60384-14		P
	If the capacitors have to be tested, they are tested according to Annex F		N/A
24.1.2	Transformers in associated switch mode power supplies comply with Annex BB of IEC 61558-2-16		N/A
	Safety isolating transformers comply with IEC 61558-2-6		N/A
	If they have to be tested, they are tested according to Annex G		N/A
24.1.3	Switches comply with IEC 61058-1, the number of cycles of operation being at least 10 000		P

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Clause	Requirement + Test		Result - Remark	Verdict
	If they have to be tested, they are tested according to Annex H			N/A
	If the switch operates a relay or contactor, the complete switching system is subjected to the test			N/A
	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested			N/A
24.1.4	Automatic controls comply with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:			N/A
	- thermostats:	10 000		N/A
	- temperature limiters:	1 000		N/A
	- self-resetting thermal cut-outs:	300		N/A
	- voltage maintained non-self-resetting thermal cut-outs:	1 000		N/A
	- other non-self-resetting thermal cut-outs:	30		N/A
	- timers:	3 000		N/A
	- energy regulators:	10 000		N/A
	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited			N/A
	Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D			N/A
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7			N/A
	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9			N/A
24.1.5	Appliance couplers comply with IEC 60320-1			N/A
	However, for class II appliances classified higher than IPX0, the appliance couplers comply with IEC 60320-2-3			N/A
	Interconnection couplers comply with IEC 60320-2-2			N/A
24.1.6	Small lamp holders similar to E10 lampholders comply with IEC 60238, the requirements for E10 lampholders being applicable			N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691		P
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		N/A
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance..... :		N/A
24.2	Appliances not fitted with:		P
	- switches, automatic controls or power supplies in flexible cords		P
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	- thermal cut-outs that can be reset by soldering, unless		P
	the solder has a melding point of at least 230 ˚C		N/A
	Switches or automatic controls in flexible cords are allowed for appliances not exceeding 25 W. (IEC 60335-2-80)		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		P
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load	Rated voltage of motor capacitor: 450 V; Measure voltage: Max.: 344,5 V (Limit: 495 V)	P

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Clause	Requirement + Test	Result - Remark	Verdict
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N/A
	In addition, the motors comply with the requirements of Annex I		N/A
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		P
	One or more of the following conditions are to be met:		P
	- the capacitors are of class S2 or S3 according to IEC 60252-1		P
	- the capacitors are housed within a metallic or ceramic enclosure		N/A
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N/A
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E		N/A
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N/A
24.101	Thermal cut-outs incorporated in duct fans in order to comply with cl. 19 are not self-resetting (IEC 60335-2-80)		N/A
25	**SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS**		—
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		P
	- supply cord fitted with a plug, the current rating and voltage rating of the plug being not less than the corresponding ratings of its associated appliance		P
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or		N/A
	- pins for insertion into socket-outlets		N/A
25.2	Appliance not provided with more than one means of connection to the supply mains		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A
25.3	Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains:		N/A
	- a set of terminals allowing the connection of a flexible cord		N/A
	- a fitted supply cord		N/A
	- a set of supply leads accommodated in a suitable compartment		N/A
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm) ..... :		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29		N/A
25.5	Method for assembling the supply cord to the appliance:		P
	- type X attachment		N/A
	- type Y attachment		P
	- type Z attachment is allowed for portable fans (IEC 60335-2-80)		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		P
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11		N/A
	• light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg		N/A
	• ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances	Max.: 8,6 kg H05VV-F	P
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		N/A
	• heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg		N/A
	• heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances		N/A
	- halogen-free, low smoke, thermoplastic insulated and sheathed		N/A
	• - light duty halogen-free low smoke flexible cable (62821 IEC 101) for circular cable and (62821 IEC 101f) for flat cable		N/A
	• - Ordinary duty halogen-free low smoke flexible cable (62821 IEC 102) for circular cable and (62821 IEC 102f) for flat cable		N/A
	Supply cords for class III appliances adequately insulated		N/A
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N/A
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm^2) ..... :	Rated current: 0,525 A Cross-sectional area: 3G0,75 mm^2	P
25.9	Supply cords not in contact with sharp points or edges		P
25.10	Supply cord of class I appliances have a green/yellow core for earthing		P
	In multi-phase appliances, the colour of the neutral conductor of the supply cord is blue.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Where additional neutral conductors are provided in the supply cord:		N/A
	- other colours may be used for these additional neutral conductors;		N/A
	- all of the neutral conductors and line conductors are identified by marking using the alpha numeric notation specified in IEC 60445		N/A
	- the supply cord is fitted to the appliance		N/A
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure		N/A
25.13	Inlet openings so constructed as to prevent damage to the supply cord		P
	If it is not evident that the supply cord can be introduced without risk of damage, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N/A
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is		N/A
	class 0, or		N/A
	a class III appliance not containing live parts		N/A
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		N/A
	- applied force (N)..... :		N/A
	- number of flexings..... :		N/A
	The test does not result in:		N/A
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord:		P
	- fixed appliances: pull 100 N; torque (not on automatic cord reel) (Nm) ..... :		P
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm)..... :	Max.: 8,6 kg, 100 N, 0,35 Nm	P
	Cord not damaged and max. 2 mm displacement of the cord	1,0 mm	P
25.16	Cord anchorages for type X attachments constructed and located so that:		N/A
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of supply cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N/A
	they are separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N/A
	it is part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N/A
	failure of the insulation of the cord does not make accessible metal parts live		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- for class II appliances they are of insulating material, or		N/A
	if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals		N/A
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	Type Y	P
25.18	Cord anchorages only accessible with the aid of a tool, or		N/A
	Constructed so that the cord can only be fitted with the aid of a tool		P
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	The conductors of the supply cord for type Y and Z attachment insulated from accessible metal parts	Type Y	P
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		N/A
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N/A
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A
25.22	Appliance inlets:		N/A
	- live parts not accessible during insertion or removal		N/A
	Requirement not applicable to appliance inlets complying with IEC 60320-1		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	the supply cord is unlikely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except that:		P
	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11		P
	- the thickness of the insulation may be reduced		P
	- for class I or class II appliance with class III construction, the cross sectional areas of the conductors need not comply with 25.8 if specified conditions are met		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected		P
25.25	Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet.		N/A
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N/A
26	**TERMINALS FOR EXTERNAL CONDUCTORS**		—
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		N/A
	the connections are soldered		N/A
	Screws and nuts not used to fix any other component, except		N/A
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N/A
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		N/A
	Terminals fixed so that when the clamping means is tightened or loosened:		N/A
	- the terminal does not become loose		N/A
	- internal wiring is not subjected to stress		N/A
	- neither clearances nor creepage distances are reduced below the values in clause 29		N/A
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm)..... :		N/A
	No deep or sharp indentations of the conductors		N/A
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and		N/A
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened		N/A
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and,		N/A
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm²)..... :		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		N/A
	conductors ends fitted with means suitable for screw terminals		N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	Type Y	P
	For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		N/A
27	**PROVISION FOR EARTHING**		—
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P
	Class 0, II and III appliances have no provision for protective earthing		N/A
	Class II appliances and class III appliances can incorporate an earth for functional purposes		N/A
	Safety extra-low voltage circuits not earthed, unless		N/A
	protective extra-low voltage circuits		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm², and		N/A
	- do not provide earthing continuity between different parts of the appliance, and		N/A
	- conductors cannot be loosened without the aid of a tool		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		N/A
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
	The allowed travel of the live and neutral brushes due to wear shall be less than the allowed travel of the earth brush so that the earthing circuit is maintained even after the appliance ceases to operate due to live and neutral brush wear. (IEC 60335-2-80)		N/A
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		P
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		P
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		N/A
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		P
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω) ..... :	Max.: 0,088 Ω	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
28	**SCREWS AND CONNECTIONS**		—
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		N/A
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity	No screw of insulating material used	N/A
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For screws and nuts; torque-test as specified in table 14..... :	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless		P
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material		N/A
	This requirement does not apply to electrical connections in circuits of appliances for which:		N/A
	• 30.2.2 is applicable and that carry a current not exceeding 0,5 A		N/A
	• 30.2.3 is applicable and that carry a current not exceeding 0,2 A		N/A
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		N/A
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N/A
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		P
	- in normal use,		N/A
	- during user maintenance,		P
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		N/A
	At least two screws being used for each connection providing earthing continuity, unless		N/A
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		P
	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	if an alternative earthing circuit is provided		N/A
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion		N/A
29	**CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION**		—
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies..... :		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation ..... :		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless ..... :	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		P
	For appliances intended for use at altitudes exceeding 2 000 m, the clearances in Table 16 is increased according to the relevant multiplier values in Table A.2 of IEC 60664-1		N/A
	Impulse voltage test is not applicable:		P
	- when the microenvironment is pollution degree 3, or		P
	- for basic insulation of class 0 and class 01 appliances, or		N/A
	- to appliances intended for use at altitudes exceeding 2 000 m		N/A
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		P

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Clause	Requirement + Test	Result - Remark	Verdict
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable ..... :	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings considered to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16:	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage ..... :	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		P
29.1.4	Clearances for functional insulation are the largest values determined from:		P
	- table 16 based on the rated impulse voltage ..... :	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N/A
	the microenvironment is pollution degree 3, or		P
	the distances can be affected by wear, distortion, movement of the parts or during assembly		P
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
	Lacquered conductors of windings considered to be bare conductors		P
	However, clearances at crossover points are not measured		P
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		P
	- table 16 based on the rated impulse voltage ..... :	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from Clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree ..... :	(see appended table)	P
	Pollution degree 2 applies, unless		N/A
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- insulation subjected to conductive pollution; pollution degree 3		P
	Microenvironment is pollution degree 3 unless insulation is enclosed or located that it is unlikely to be exposed to pollution during normal use. (IEC 60335-2-80)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17 ..... :	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17 ..... :		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 ..... :		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable ..... :		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable ..... :		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18 ..... :	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18 ..... :		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		P
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- for insulation, other than single layer internal wiring insulation, by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		N/A
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm	Control box: 2,2 mm	P
	Reinforced insulation have a thickness of at least 2 mm		N/A
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consist of at least 2 layers		N/A
	Reinforced insulation consist of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N/A
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19..... :		N/A
30	**RESISTANCE TO HEAT AND FIRE**		—
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	parts of thermoplastic material providing supplementary or reinforced insulation		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P

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Clause	Requirement + Test	Result - Remark	Verdict
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C)..... :	(see appended table)	P
	Parts supporting live parts tested at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C) ..... :		N/A
	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C)..... :		N/A
30.2	Parts of non-metallic material resistant to ignition and spread of fire		P
	This requirement does not apply to:		P
	parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or		N/A
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		P
	Compliance checked by the test of 30.2.1, and in addition:		P
	- for attended appliances, 30.2.2 applies		N/A
	- for unattended appliances, 30.2.3 applies		P
	For appliances for remote operation, 30.2.3 applies		N/A
	For base material of printed circuit boards, 30.2.4 applies		P
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550°C	(see appended table 30.2)	P
	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or		N/A
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N/A
30.2.2	Not applicable. (IEC 60335-2-80)		P
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P

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Clause	Requirement + Test	Result - Remark	Verdict
	The tests are not applicable to conditions as specified ..... :		N/A
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and		P
	parts of non-metallic material, other than small parts, within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C	(see appended table 30.2)	P
	Glow-wire applied to an interposed shielding material, if relevant		P
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C		N/A
30.2.3.2	Parts of non-metallic material supporting connections, and		P
	parts of non-metallic material within a distance of 3mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with appropriate severity level:		P
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation	(see appended table 30.2)	P
	- 650 °C, for other connections		N/A
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications:		N/A
	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N/A
	• 775 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	• 675 °C, for other connections		N/A
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:		N/A
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	The glow-wire test is also not carried out on small parts. These parts are to:		N/A
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of Annex E, or		N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	The consequential needle-flame test of Annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		N/A
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		N/A
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts for which the needle-flame test of Annex E was applied, or		N/A
	- small parts for which a material classification of V-0 or V-1 was applied		N/A
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		N/A
	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or		N/A
	- parts shielded by a flame barrier that meets the needle-flame test of Annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of Annex E	(See appended table)	P
	Test not applicable to conditions as specified..... :		N/A
E	**ANNEX E (NORMATIVE)** **NEEDLE-FLAME TEST**		—
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		N/A
7	Severities		—

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Clause	Requirement + Test	Result - Remark	Verdict
	The duration of application of the test flame is 30 s ± 1 s		P
9	Test procedure		—
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1		P
9.2	The first paragraph does not apply		P
	If possible, the flame is applied at least 10 mm from a corner		P
9.3	The test is carried out on one specimen		P
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N/A
11	Evaluation of test results		—
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		P
K	**ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES**		—
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	**ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES**		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Information for the determination of clearances and creepage distances		P
M	**ANNEX M (NORMATIVE) POLLUTION DEGREE**		—
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		P
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		N/A
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		P
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		P
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N/A
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N/A
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		P
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
N	**ANNEX N (NORMATIVE) PROOF TRACKING TEST**		—
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		P
7	Test apparatus		—
7.3	Test solutions		P
	Test solution A is used		P
10	Determination of proof tracking index (PTI)		—
10.1	Procedure		P

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Clause	Requirement + Test	Result - Remark	Verdict
	The proof voltage is 100V, 175V, 400V or 600V.. :	175 V (Control panel, Connector on control PCB(grey), Fan motor bobbin, Closed-end connector, Closed-end connector shielding control box)	P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N/A
10.2	Report		N/A
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	**ANNEX O (INFORMATIVE)** **SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30**		—
	Description of tests for determination of resistance to heat and fire		P
Q	**ANNEX Q (INFORMATIVE)** **SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS**		—
	Description of tests for appliances incorporating electronic circuits		P

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11.8	**TABLE: Heating test**		P
	Test voltage (V)..... :	254,4	—
	Ambient t1(°C) ..... :	40,0	—
	Ambient t2(°C) ..... :	40,3	

Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Power cord	10,7	50-15=35
Interconnection cord	2,2	50-15=35
Motor metal cover	24,1	59-15=44
Control panel	3,1	60-15=45
Control box	4,5	For clause 30.1
Internal wire	21,9	T80-40=40
Main motor running capacitor	4,6	T70-40=30
Fan motor winding	62,7	115-15=100 Class155)
Thermal link build in fan motor	64,7	Ref
Connector on control PCB (gray)	16,3	For clause 30.1
Control PCB	6,7	120-15=105
X2 capacitor(big)	10,0	T105-40=65
X2 capacitor(small)	10,1	T105-40=65
Varistor	12,1	T85-40=45
Test floor	1,0	65-15=50

11.8	**TABLE: Heating test, resistance method**		P
	Test voltage (V)..... :	254,4	—
	Ambient, t1 (°C) ..... :	40,0	—
	Ambient, t2 (°C) ..... :	40,3	—

Temperature rise of winding:	**R1 (Ω)**	**R2 (Ω)**	**Δ T (K)**	**Max. Δ T (K)**	**Insulation class**
Motor winding	743,5	992,0	91,4	100	155
Supplementary information: test with model FES-45C					

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13.2	**TABLE: Leakage current**		P
	Heating appliances: 1,15 x rated input (W) ..:	—	—
	Motor-operated and combined appliances: 1,06 x rated voltage (V).....:	1,06 x 240 V= 254,4 V	—

Leakage current between:	**I (mA)**	**Max, allowed I (mA)**
Between live part and accessible earthed metal part	0,06	0,75
Between live part and control panel	0,07	0,35 Peak
Supplementary information: only recorded the maximum value (tropical climates)		

13,3	**TABLE: Dielectric strength**	P

Test voltage applied between:	**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**
Between live part and control panel	3000	No
Between live part of motor running capacitor and accessible part	2,4 U +2400= 3070,6	No
Between Internal wires and accessible parts	1750	No
Between live part and accessible earthed metal parts	1000	No
Supplementary information: only recorded the maximum value (tropical climates)		

16.2	**TABLE: Leakage current**		P
	Single phase appliances: 1.06 x rated voltage (V) .....:	1,06 x 240 V= 254,4 V	—
	Three phase appliances 1.06 x rated voltage divided by √3 (V).....:	—	—

Leakage current between:	**I (mA)**	**Max. allowed I (mA)**
Between live part and accessible earthed metal part	0,10	0,75
Between live part and control panel	0,12	0,25
Supplementary information:		

16.3	**TABLE: Dielectric strength**	P

Test voltage applied between:	**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**

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Between live part and control panel	3000	No
Between live part of motor running capacitor and accessible part	2,4 U +2400= 3070,6	No
Between Internal wires and accessible parts	1750	No
Between live part and accessible earthed metal parts	1000	No
Supplementary information: --		

21,1	TABLE: Impact resistance		P
Impacts per surface	**Surface tested**	**Impact energy (Nm)**	**Comments**
3	Control panel	0,5 J	No damage
3	Metal enclosure	0,5 J	No damage
3	Fan guard	0,5 J	No damage
3	Rotary switch	0,5 J	No damage
Supplementary information:			

24.1	TABLE: Critical components information				P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Plug	Shun De Tian Ju Electrical Co., Ltd.	TJ-003	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40007971
(Alternative)	Han Li Electrical Wire Production Co., Ltd.	HL-803	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40008076
(Alternative)	Hunan Aomeng Electrical Equipment Co., Ltd.	AM-007	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40016388
(Alternative)	Yu Jia Wire Electronics Co., Ltd.	YJ-5883	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40023982
(Alternative)	Jiangmen Gomentech Electrical Co., Ltd.	GM-01	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40023785
(Alternative)	Zhongshan Hongyun Electrical Appliance Co., Ltd.	HY-007	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40041978
(Alternative)	Jhi Wei Electric Wire & Cable Co., Ltd.	JW-07	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40005764

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(Alternative)	Guangdong KaiHua Electric Appliance Co., Ltd.	KH-9902	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40010410
(Alternative)	Foshan Shunde WeiLiCan Industry Co., Ltd.	WLJ-302	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40038264
(Alternative)	Hong Shan Chuan Industry (Shen Zhen) Co., Ltd.	HSC-402, HSC-403	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40021749
(Alternative)	Zhongshan Ke Jin Power Supply Cord Co., Ltd.	KJ-138	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40011001
(Alternative)	Guangdong Yincheng Electric Appliance Co., Ltd.	YC-F16	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40026066
(Alternative)	Ningbo Dabu Electric Appliance Co., Ltd.	DB03	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40031728
(Alternative)	Shengyi Electrical Factory	SY-22	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40007744
(Alternative)	Foshan Shunde Beijiao Qinglang Electrical Factory	QL-01	AC 250 V; 16 A	DIN VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40045731
BS Plug	Hangzhou Hongshi Electrical Ltd.	SW 168	AC 250 V; 3 A, 6 A,10 A,13 A (with fuse 3 A, 6 A,10 A,13 A)	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 10807
(Alternative)	JiangMen YinCheng Wire Co., Ltd.	YC-185	AC 250 V; 3 A, 6 A,10 A,13 A (with fuse 3 A, 6 A,10 A,13 A)	BS 1363-1 SS 145-1 IEC 60884-1: 2002 + A1 + A2	DEKRA 35-105517
(Alternative)	Ching Cheng Wire Material Co., Ltd.	EL-210A	AC 250 V; 3 A, 6 A,10 A,13 A (with fuse 3 A, 6 A,10 A,13 A)	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 39096
(Alternative)	Dongguan Dechang Electronic Co., Ltd.	DC-168A	AC 250 V; 3 A, 6 A,10 A,13 A (with fuse 3 A, 6 A,10 A,13 A)	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	ASTA 846
(Alternative)	Hanli Electric Wire Production Co., Ltd.	HL-881, HL-882	AC 250 V; 3 A,13 A (with fuse 3 A,13 A)	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	DEKRA 4318773.01 REV.1
(Alternative)	Shenzhen Hong Shan Chuan Industry Co., Ltd.	HSC-601	AC 250 V; 3 A, 6 A,10 A,13 A (with fuse 3 A, 6 A,10 A,13 A)	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	ASTA 1266
(Alternative)	Foshan Shunde Beijiao Qinglang Electrical Factory	QL-07	AC 250 V; 3 A, 6 A,10 A (with fuse 3 A, 6 A,10 A)	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	ASTA 1357

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Plug for Swiss	Zhongshancity Hongshanchuan Polymer Materials Co., Ltd.	HSC-402	AC 250 V; 10 A	SEV 1011 IEC 60884-1: 2002 + A1 + A2	SEV 19.0468
Plug for Italy	Kenic Electric Mfg. Co., Ltd.	KE-29	AC 250 V; 10 A	CEI 23-50-II IEC 60884-1: 2002 + A1 + A2	IMQ EM352
(Alternative)	Zhongshancity Hongshanchuan Polymer Materials Co., Ltd.	HSC-603	AC 250 V; 10 A	CEI 23-50 IEC 60884-1: 2002 + A1 + A2	DEKRA 4332267.01
(Alternative)	Zhongshan Guzhen Hongli Cable & A.F.	HL-14	AC 250 V; 10 A	CEI 23-50-II IEC 60884-1: 2002 + A1 + A2	IMQ CA02,02729
Plug for AU	Zhongshan City Hong Shan Chuan Electrical Equipment Industrial Co., Ltd.	HSC-502	AC 250 V; 10 A	AS/NZS 3112 AS/NZS 3100 IEC 60884-1: 2002 + A1 + A2	SAA-161375-EA
(Alternative)	Shun De Hanli Electri Wire Production Co., Ltd.	HL-806	AC 250 V; 10 A	AS/NZS 3112 IEC 60884-1: 2002 + A1 + A2	Queensland Government ESO170512
(Alternative)	Foshan Shunde Beijiao Qinglang Electrical Factory	QL-05	AC 250 V; 10 A	AS/NZS 3112 AS/NZS 3100 IEC 60884-1: 2002 + A1 + A2	SAA-180867-EA
(Alternative)	Jiangmen YinCheng Wire Co., Ltd.	YC-18	AC 250 V; 10 A	AS/NZS 3112 AS/NZS 3100 IEC 60884-1: 2002 + A1 + A2	SAA-191016-EA
Plug for Singapore	**TOH (RS Code) Mr Ronnie Toh A.C. Toh Enterprises**	**YC-185**	**AC 250 V; 13 A**	**SS 145: Part 1: 2010 IEC 60884-1: 2002 + A1 + A2**	**181075-11**
(Alternative)	**GLA (RS Code) Global Approvals Pte Ltd**	**HSC-601**	**AC 250 V; 3 A,6A,10A,13 A (with fuse 3 A,6A,10A,13 A)**	**SS 145: Part 1: 2010 IEC 60884-1: 2002 + A1 + A2**	**161184-12**
(Alternative)	**GLA (RS Code) Global Approvals Pte Ltd**	**9518**	**AC 250 V; 3 A,6A,10A,13 A (with fuse 3 A,6A,10A,13 A)**	**SS 145: Part 1: 2010 IEC 60884-1: 2002 + A1 + A2**	**170860-12**
Plug for Saudi Arabia	**Jiangmen Yincheng Wire Co., Ltd.**	**YC-185**	**AC 250 V; 3 A, 6 A, 10 A, 13 A (with fuse 3 A, 6 A, 10 A, 13 A)**	**SASO 2203: 2018 IEC 60884-1: 2002 + A1 + A2**	**DEKEA 4342544.51**
(Alternative)	**Foshan Shunde Beijiao Qinglang Electrical Factory**	**QL-07**	**AC 250 V; 3 A,6A,10A,13 A (with fuse 3 A,6A,10A,13 A)**	**SASO 2203: 2018 IEC 60884-1: 2002 + A1 + A2**	**190729170G ZU-VOC002**

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(Alternative)	**Shen Zhen Hong Shan Chuan Industrial Co., Ltd**	**HSC-601**	**AC 250 V; 3 A,6A,10A,13 A (with fuse 3 A,6A,10A,13 A)**	**SASO 2203: 2018 IEC 60884-1: 2002 + A1 + A2**	**190613073G ZU-001VOC**
Plug for Malaysia	**Jiangmen Yincheng Wire Co., Ltd.**	**YC-185**	**AC 250 V; 3 A, 6 A, 10 A, 13 A (with fuse 3 A, 6 A, 10 A, 13 A)**	**BS 1361: 2016 + A1 IEC 60884-1: 2002 + A1 + A2**	**SJT1611081 14922019**
(Alternative)	**ZX**	**9518**	**AC 250 V; 3 A,6A,10A,13 A (with fuse 3 A,6A,10A,13 A)**	**MS 589-1:2011 IEC 60884-1: 2002 + A1 + A2**	**SJT1611081 20392019**
(Alternative)	**KAIBOR**	**KB-388**	**AC 250 V; 3 A,6A,10A,13 A (with fuse 3 A,6A,10A,13 A)**	**MS 589-1:2011 IEC 60884-1: 2002 + A1 + A2**	**SJT1611091 25022019**
Power cord	Han Li Electrical Wire Production Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40021389
(Alternative)	**Guangdong Yincheng Electric Appliance Co. Ltd.**	**H05VV-F 60227 IEC 53**	**3G 0,75 mm^2**	**EN 50525-2-11: 2011 IEC 60227-5: 2011**	**VDE 40018525**
(Alternative)	Ping Nan Electric Wire Industry Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40003588
(Alternative)	Zhongshan Xiaolan Qiangli Electric Factory Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 109832
(Alternative)	Jiangmen Gomentech Electrical Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40018946
(Alternative)	Jhi Wei Electric Wire & Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40004775
(Alternative)	Guangdong KaiHua Electric Appliance Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40001903
(Alternative)	Foshan Shunde WeLiCan Industry Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40036550
(Alternative)	Hong Shan Chuan Industry (Shen Zhen) Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40037206
(Alternative)	Guangdong Yincheng Electric Appliance Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40018525

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(Alternative)	Zhongshan Ke Jin Power Supply Cord Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40013045
(Alternative)	Foshan Shunde Beijiao Qinglang Electrical Factory	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40044855
(Alternative)	Sheng Yi Electrical Factory	H05VV-F 60227 IEC 53	3G 0,75 mm^2	EN 50525-2-11 IEC 60227-5: 2011	VDE 40023272
Power cord for AU	Zhongshancity Hongshanchuan Polymer Materials Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	AS/NZS 60227.5 IEC 60227-5: 2011	SAA-170632-EA
(Alternative)	Foshan Shunde Beijiao Qinglang Electrical Factory	H05VV-F 60227 IEC 53	3G 0,75 mm^2	AS/NZS 60227.5 IEC 60227-5: 2011	SAA-180768-EA
(Alternative)	Guangdong Yincheng Electric Appliance Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	AS/NZS 60227.5 IEC 60227-5: 2011	SAA-190444-EA
(Alternative)	Hanli Electric Wire Production Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2	AS/NZS 60227.5 IEC 60227-5: 2011	energysafe VICTORIA ESV160251/00
Interconnection cord	**Hong Shan Chuan Industry (Shen Zhen) Co., Ltd.**	**H05VV-F 60227 IEC 53**	**5G 0,75 mm^2**	**EN 50525-2-11: 2011 IEC 60227-5: 2011**	**VDE 40037206**
Thermal link	Zhangzhou Aupo Electronics Co., Ltd.	A4/A4-F/B4-F/B4	AC 250 V; 2 A; 130 ℃	IEC 60691: 2015 EN 60691	VDE 40008720
(Alternative)	Dongguan Wancheng Fuse Co., Ltd.	T3	AC 250 V; 2 A; 130 ℃	IEC 60691: 2002 + A1 + A2 EN 60691	TUV R 50077429
Running capacitor (for FE-23A, FE-23, FE-30, FE-30D, FE-35, FE-35D, FE-40A, FE-40B, FE-45B, FE-25D, FZ-30M)	Foshan City Shunde District Xunwei Capacitor Co., Ltd.	CBB61-3	450 V a.c.; 50/60 Hz; 1,5 uF; T70 or T85; P2 or S3	EN 60252-1 IEC 60252-1: 2010 + A1	TUV R 50269214
(Alternative)	Guangdong Fengming Electronic Tech. Co., Ltd.	CBB61-P2	450 V a.c.; 50 / 60 Hz; 1,5 uF; T70 or T85; P2	EN 60252-1 IEC 60252-1: 2010 + A1	TUV R 50163114
(Alternative)	Xunde Electrical and Electronic Co., Ltd.	CBB61	450 V a.c.; 50 / 60 Hz; 1,5 uF; T85; P2	EN 60252-1 IEC 60252-1: 2010 + A1	TUV R 50105972

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Running capacitor (for FE-40, FE-40D, FE-45, FE-45A, FE-45F, FE-45D, FE-50, FE-50A, FE-50D, FES-40, FES-45, FES-45D, FES-45B, FES-45C, FES-45A, FES-50, FES-50C	Foshan City Shunde District Xunwei Capacitor Co., Ltd.	CBB61-3	450 V a.c.; 50 / 60 Hz; 2,0 uF; T70 or T85; P2 or S3	EN 60252-1 IEC 60252-1: 2010 + A1	TUV R 50269214
(Alternative)	Guangdong Fengming Electronic Tech. Co., Ltd.	CBB61-P2	450 V a,c,; 50 / 60 Hz; 2,0 uF; T70 or T85; P2	EN 60252-1 IEC 60252-1: 2010 + A1	TUV R 50163114
(Alternative)	Xunde Electrical and Electronic Co., Ltd.	CBB61	450 V; 50 / 60 Hz; 2,0 uF; T85; P2	EN 60252-1 IEC 60252-1: 2010 + A1	TUV R 50105972
Internal wire	Foshan Shunde Longhen Industry Co., Ltd.	1007	24-18 AWG; 300 V; 80 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E254394
(Alternative)	Foshan Shunde Longhen Industry Co., Ltd.	1015	24-18 AWG; 600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E254394
(Alternative)	Shunde Beijiao Jinhui Plastic Metals Factory	1007	24-18 AWG; 300 V; 80 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E237283
(Alternative)	Shunde Beijiao Jinhui Plastic Metals Factory	1015	24-18 AWG; 600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E237283
(Alternative)	Guangdong Zhihe Wire & Cable Co., Ltd.	1007	24-18 AWG; 300 V; 80 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E251728
(Alternative)	Guangdong Zhihe Wire & Cable Co., Ltd.	1015	24-18 AWG; 600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E251728
(Alternative)	Foshan City Shunde Jin Sheng Long Ele Appl Co., Ltd.	1007	24-18 AWG; 300 V; 80 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E245714
(Alternative)	Foshan City Shunde Jin Sheng Long Ele Appl Co., Ltd.	1015	24-18 AWG; 600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E245714

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(Alternative)	Shenzhen Zhengerya Technology Co., Ltd.	1007	24-18 AWG; 300 V; 80 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E242343
(Alternative)	Shenzhen Zhengerya Technology Co., Ltd.	1015	24-18 AWG; 600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E242343
(Alternative)	Foshan Qiwei Electric Wire & Cable Co., Ltd.	1007	24-18 AWG; 300 V; 80 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E485587
(Alternative)	Foshan Qiwei Electric Wire & Cable Co., Ltd.	1015	24-18 AWG; 600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E485587
(Alternative)	Foshan City Shunde District Beijiao Qinglang Electrical Factory	1007	24-18 AWG; 300 V; 80 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E365204
(Alternative)	Foshan City Shunde District Beijiao Qinglang Electrical Factory	1015	24-18 AWG; 600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E365204
Closed-end connector	Heavy Power Co., Ltd.	CE1, CE2	300 V; 150 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E113650
(Alternative)	Shenzhen Hongyu Electrical Co., Ltd.	HY-CE1 HY-CE2	300 V; 150 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E314734
Push-button switch (for models except FE-23, FE-23A, FE-25D, FZ-30M)	Hongji Electrical Equipment Co., Ltd.	KQ34	AC250 V; 50 / 60 Hz; 1A; 1E4; T55; GWT850 ℃	EN 61058-1 / A2: 2008 IEC 61058-1	TUV SUD B 09 03 38390 022
(Alternative)	Zhongshan Xiaolan Yongjiang Plastic Electrical Plant	KQ-4	AC250 V; 50 Hz; 1(1)A; 1E4; T55; GWT850 ℃	EN 61058-1 IEC 61058-1: 2000 + A1 + A2	TUV R 50052866
(Alternative)	Zhongshan Xiaolan Huafeng Electrical Appliance Manufactory	ZD-418	AC250 V; 50 Hz; 1(1)A; 1E4; T55; GWT850 ℃	EN 61058-1 IEC 61058-1: 2000 + A1 + A2	TUV R 50082610
(Alternative)	**Foshan Shunde Yuanfeng Metal Electrical Appliances Co., Ltd.**	**YQ01-4**	**AC 250 V; 50/60 Hz; 1(1)A; 1E4; T55; GWT850 ℃**	**EN 61058-1: 2002 + A2 IEC 61058-1: 2000 + A1 + A2**	**TUV R 50320987**

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Rotary switch (for FE-23 and FE-23A, FE-25D, FZ-30M)	Zhongshan Xiaolan Yongjiang Plastic Electrical Plant	GZS-6 GZS-6B	AC250 V; 50 Hz; 1(1)A; 1E4; T55; GWT850 ℃	EN 61058-1 IEC 61058-1: 2000 + A1 + A2	TUV R 50033175
Motor (For FE-23, FE-30, FE-30D)	Zhongshan city Nantou Weili Electrical Factory	ME-30	220-240 V; 50 Hz / 60 Hz; 55 W; Class 155	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
-winding	Heshan City Tehsing Huanchiu Electric Cable Co., Ltd.	PEW	155 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E242554
-tape	Jingjiang Jingyi Adhesive Product Co., Ltd.	J16	180 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E246950
Motor (For FE-23A)	Zhongshan city Nantou Weili Electrical Factory	ME-23	220-240 V; 50 Hz; 40 W; Class 155	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
-winding	Heshan City Tehsing Huanchiu Electric Cable Co., Ltd.	PEW	155 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E242554
-tape	Jingjiang Jingyi Adhesive Product Co., Ltd.	J16	180 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E246950
Motor (For FE-40A, FE-40B, FE-45B, FE-35, FE-35D, FE-25D, FZ-30M)	Zhongshan city Nantou Weili Electrical Factory	ME-35	220-240 V; 50 Hz / 60 Hz; 70 W; Class 155	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
-winding	Heshan City Tehsing Huanchiu Electric Cable Co., Ltd.	PEW	155 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E242554
-tape	Jingjiang Jingyi Adhesive Product Co., Ltd.	J16	180 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E246950
Motor (For FES-45D, FES-45, FES-40, FES-45B, FE-40, FE-40D, FE-45, FE-45A, FES-45A)	Zhongshan city Nantou Weili Electrical Factory	ME-40	220-240 V; 50 Hz / 60 Hz; 100 W; Class 155	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance

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-winding	Heshan City Tehsing Huanchiu Electric Cable Co., Ltd.	PEW	155 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E242554
-tape	Jingjiang Jingyi Adhesive Product Co., Ltd.	J16	180 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E246950
Motor (For FE-50, FE-50A, FE-50D, FE-50B, FES-50, FES-50C, FES-45C, FE-45F, FE-45D)	Zhongshan city Nantou Weili Electrical Factory	ME-50	220-240 V; 50 Hz / 60 Hz; 120 W; Class 155	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
-winding	Heshan City Tehsing Huanchiu Electric Cable Co., Ltd.	PEW	155 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E242554
-tape	Jingjiang Jingyi Adhesive Product Co., Ltd.	J16	180 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance UL E246950
PVC tube	Foshan Shunde Kaidaxin Plastic Industry Co., Ltd.	KDS01	600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E314911
(Alternative)	Foshan Shunde Beijiao Lianda Co., Ltd.	LHX-01	600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E218446
(Alternative)	Shenzhen Gaoertai Electyonics Co., Ltd.	GET-600	600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E230502
(Alternative)	Foshan Qiwei Electric Wire & Cable Co., Ltd.	LH-01	600 V; 105 ℃	IEC/EN 60335-2-80 IEC/EN 60335-1	Test with appliance UL E355328
(Alternative)	**Foshan City Shunde District Beijiao Qinglang Electrical Factory**	**2733**	**600 V; 105 °C**	**IEC/EN 60335-2-80 IEC/EN 60335-1**	**Tested with appliance UL E365204**
X2 capacitor (For FES-45C, FES-45D, FES-50C)	Guangdong Fengming Electronic Tech. Co., Ltd.	MKP-X2	AC 275 V; 1,0 uF; T105; X2	EN 60384-14 IEC 60384-14: 2013 + A1	VDE 40025702
(Alternative)	Rugao Shuangcheng Electronic Co., Ltd,	MKP	AC 275 V; 1,0 uF; T100; X2	EN 60384-14 IEC 60384-14: 2013 + A1	VDE 40025673

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(Alternative)	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	MPX	AC 275 V; 1,0 uF; T110; X2	EN 60384-14 IEC 60384-14: 2013 + A1	VDE 40034679
(Alternative)	Dain Electronics Co., Ltd.	MPX, NPX, MEX	AC 275 V; 1,0 uF; T110; X2	EN 60384-14 IEC 60384-14: 2013 + A1	VDE 40018798
(Alternative)	**Dong Guan Ajc Industrial Co., Ltd.**	**MPX/MKP**	**275/305/310 VAC; 40/110/56; 0.1µF**	**IEC 60384-14: 2013 + A1 EN 60384-14: 2013 + A1**	**VDE 40045532**
(Alternative)	**Foshan Shunde Chuang Ge Electronic Industrial Co., Ltd.**	**MKP-X2**	**AC 275 V; 40/105/21; 0.1µF**	**IEC 60384-14: 2013 + A1 EN 60384-14: 2013 + A1**	**VDE 40008922**
(Alternative)	**Dong Guan Ajc Industrial Co., Ltd.**	**MPX/MKP**	**275/305/310 VAC; 40/110/56; 0.82µF**	**IEC 60384-14: 2013 + A1 EN 60384-14: 2013 + A1**	**VDE 40045532**
(Alternative)	**Foshan Shunde Chuang Ge Electronic Industrial Co., Ltd.**	**MKP-X2**	**AC 275 V; 40/105/21; 0.82µF**	**IEC 60384-14: 2013 + A1 EN 60384-14: 2013 + A1**	**VDE 40008922**
Current fuse (For FES-45C, FES-45D, FES-50C)	Shenzhen Lanson Electronics Co., Ltd.	3K	AC 250 V; 2 A;	IEC 6027-1: 2006 + A1 + A2 IEC 6027-3: 2015 EN 60127-1 EN 60127-3	VDE 40010682
(Alternative)	Zhongshan Lanbao Electrical Appliances Co., Ltd.	RTI-10	AC 250 V; 2 A;	IEC 6027-1: 2006 + A1 + A2 IEC 6027-3: 2015 EN 60127-1 EN 60127-3	VDE 40017009
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd.	3T	AC 250 V; 2 A;	IEC 6027-1: 2006 + A1 + A2 IEC 6027-3: 2015 EN 60127-1 EN 60127-3	VDE 40019614
(Alternative)	**Dongguan Hongda Electronic Technology Co., Ltd.**	**31TC**	**250 V~; 2 A**	**IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2006 + A1 + A2 EN 60127-3: 2015**	**VDE 40028150**

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PCB (For FES-45C, FES-45D, FES-50C)	Shandong Jinbao Electronics Co., Ltd.	ZD-90F ZD-95(G)F	Measured thickness: 1,6 mm	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance VDE 40032178
(Alternative)	**Kingboard Laminates Holdings Ltd.**	**CEM-1-KB-5150 ZJ-YHFS05D**	**1.6mm; V-0**	**IEC/EN 60335-1 IEC/EN 60335-2-80**	**VDE 40040433 Tested with appliance**
Varistor (For FES-45C, FES-45D, FES-50C)	**Cerglass MFG Inc**	**10D471K**	**AC2500V; T85**	**IEC 61051-1: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 DIN EN 61051-1: 2009**	**VDE 40028836**
Alternative	**Xi'an Xiwuer Electronics & Information Co., Ltd.**	**MYG3-10K300**	**AC 2500 V; T85**	**IEC 61051-1: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 DIN EN 61051-1: 2009**	**VDE 40008528**
Alternative	**Hongzhi Enterprises Ltd.**	**HEL-10D471K**	**AC 2500 V; T85**	**IEC 61051-1: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 DIN EN 61051-1: 2009**	**VDE 40037512**
Plastic box for the wire connector / control box	Taiwan Chi Mei	ABS766	ABS	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
Plastic enclosure	Jilin City Jihua Chemical Co., Ltd.	0215A	ABS	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
Fan blade	Lg Chemical (Guangzhou) Engineering Plastics Co., Ltd.	LUPOL GP-2200	PP; V-0	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
(Alternative)	Beihai Keen's Colored Printing Co., Ltd.	KEEN-PET01	Nylon	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
Switch box	Changzhou Zhongtian Print Co., Ltd.	ZT2	Steel	IEC/EN 60335-2-80 IEC/EN 60335-1	Tested with appliance
Supplementary information: [1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

28.1	TABLE: Threaded part torque test		P
Threaded part identification:	**Diameter of thread (mm)**	**Column number (I, II, or III)**	**Applied torque (Nm)**
Enclosure screw	2,9	II	0,5
Supplementary information:			

29,1	TABLE: Clearances		P
	Overvoltage category .... :	II	—

		Type of insulation:				
Rated impulse voltage (V):	**Min, cl (mm)**	**Basic (mm)**	**Supplementary (mm)**	**Reinforced (mm)**	**Functional (mm)**	**Verdict / Remark**
330	0,2* / 0,5 / 0,8**	--	--	--	--	N/A
500	0,2* / 0,5 / 0,8**	--	--	--	--	N/A
800	0,2* / 0,5 / 0,8**	--	--	--	--	N/A
1 500	0,5 / 0,8** / 1,0***	--	--	--	--	N/A
2 500	1,5 / **2,0*** **	1) 3,0	8,5	--	3,3	**P**
2 500	1,5 / **2,0*** **	2) 5,5	--	--	--	**P**
2 500	1,5 / **2,0*** **	3) 4,2	--	--	--	**P**
4 000	3,0 / **3,5*** **	--	--	9,0	--	**P**
6 000	5,5 / 6,0***	--	--	--	--	N/A
8 000	8,0 / 8,5***	--	--	--	--	N/A
10 000	11,0 / 11,5***	--	--	--	--	N/A

Supplementary information:

*) For tracks on printed circuit boards if pollution degree 1 and 2
**) For pollution degree 3
***) If the construction is affected by wear, distortion, movement of the parts or during assembly

Basic insulation 1): between motor winding and earthed metal;
Basic insulation 2): between live part motor running capacitor and earthed metal enclosure of motor;
Basic insulation 3): between live part and earthed metal;
Supplementary insulation: between internal wire / supply cord and accessible part;
Reinforced insulation: between live part PCB and accessible part;
Functional insulation: between L & N

29,2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V):	**Creepage distance (mm) Pollution degree**										
	1	**2**			**3**			**Type of insulation**			
		Material group			**Material group**						
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**B****	**S****	**R****	**Verdict**
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9		—	—	N/A
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—		—	N/A
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—		N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N/A
250	0,56	1,25	1,8	2,5	3,2	3,6	**2,0**	1)3,0	—	—	**P**
250 **279,4*****	0,56	1,25	1,8	2,5	3,2	3,6	4,0/ **4,5*****	2)5,5	—	—	**P**
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	3)4,2	—	—	**P**
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	—	8,5	—	**P**
250	1,12	2,5	3,6	5,0	6,4	7,2	**8,0**	—	—	9,0	**P**
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A

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>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

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Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V
**) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation

***) As the working voltage of motor running capacitor was 279,4 V, then the limit was 4,5 mm.

Basic insulation 1): between motor winding and earthed metal;
Basic insulation 2): between live part motor running capacitor and metal enclosure of motor;
Basic insulation 3): between live part and earthed metal;
Supplementary insulation: between internal wire / supply cord and accessible part;
Reinforced insulation: between live part PCB and accessible part;
Functional insulation: between L & N

29,2	**TABLE: Creepage distances, functional insulation**							P
Working voltage (V):	**Creepage distance (mm) Pollution degree**							
	1	**2**			**3**			
		Material group			**Material group**			
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**Verdict / Remark**
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	N/A
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	N/A
250	0,42	1,0	1,4	2,0	2,5	2,8	**3,2**	**3,3 / P**
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	N/A
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A

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Supplementary information:

*) Material group IIIb is allowed if the working voltage does not exceed 50 V

Remark:

Functional insulation: between L & N

30.1	TABLE: Ball Pressure Test of Thermoplastics		P
Allowed impression diameter (mm) .....:		2 mm	—
Object/ Part No./ Material	**Manufacturer/ trademark**	**Test temperature (°C)**	**Impression diameter (mm)**
Control box	Taiwan Chi Mei	75	1,23
Connector on control PCB (grey)	—	125	1,37
Supplementary information:			

30.2	TABLE: Resistance to heat and fire - Glow wire tests							P
Object/ Part No./ Material	**Manufacturer/ trademark**	**Glow wire test (GWT); (°C)**						**Verdict**
		550	**650**		**750**		**850**	
			te	**ti**	**te**	**ti**		
Control box	Taiwan Chi Mei	x	—	—	—	—	—	P
Control panel	—	x	—	—	—	—	—	P
Connector on control PCB (gray)	—	—	—	—	0s	0s	x	P
X2 capacitor(big)*	Dong Guan Ajc Industrial Co., Ltd.	—	0s	0s	—	—	—	P
X2 capacitor(small)*	Dong Guan Ajc Industrial Co., Ltd.	—	0s	0s	—	—	—	P
Closed-end connector shielding control box	—	—	—	—	0s	0s	x	P
Push-button switch	Foshan Shunde Yuanfeng Metal Electrical Appliances Co., Ltd.	—	—	—	0s	0s	x	P
Object/ Part No./	**Manufacturer/**	**Glow-wire flammability index (GWFI), °C**			**GW ignition temp. (GWIT), °C**			**Verdict**

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Material	trademark	550	650	750	850	675	775	
The test specimen passed the glow wire test (GWT) with no ignition [($t_e - t_i$) ≤ 2s] (Yes/No):								Yes
If no, then surrounding parts passed the needle-flame test of annex E (Yes/No) .....:								N/A
The test specimen passed the test by virtue of most of the flaming material being withdrawn with the glow-wire (Yes/No)? .....:								Yes
Ignition of the specified layer placed underneath the test specimen (Yes/No).....:								No
Supplementary information: - 550 °C GWT not relevant (or applicable) to parts of material classified at least HB40 or if relevant HBF - The GWIT pre-selection option, the 850 °C GWFI pre-selection option, and the 850 °C GWT are not relevant (or applicable) for attended appliances * Only the unfavourable result for this component was displayed.								

30.2/30.2.4	TABLE: Needle- flame test (NFT)				P
Object/ Part No./ Material	**Manufacturer/ trademark**	**Duration of application of test flame (ta); (s)**	**Ignition of specified layer Yes/No**	**Duration of burning (tb) (s)**	**Verdict**
PCB	Kingboard Laminates Holdings Ltd.	30 s	Yes	1,7 s	P
Supplementary information: - NFT not relevant (or applicable) for Parts of material classified as V-0 or V-1 - NFT not relevant (or applicable) for Base material of PCBs classified as V-0 or if relevant VTM-0					

-- End of report --

EN 60335-1: 2012/ A1 + A14+ A2 ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-1 Household and similar electrical appliances – Safety – Part 1: General requirements	
Differences according to:	EN 60335-1: 2012 /A1: 2019+ A14: 2019+A2: 2019 VS IEC 60335-1:2010/A1:2013+A2:2016
Attachment Form No.:	EN 60335_1
Attachment Originator:	SGS-CSTC
Master Attachment:	Date 2019-09

EN 60335-1: 2012 /A1: 2019			
11	**Heating**		—
11.8	Comment to be retained in the amendment: The deletion of the second sentence in the first paragraph was carried out in the existing common modifications.		P
	In Table 3 delete footnotes za, zb, zc, zd.		P
24	**Components**		—
	Comment to be retained in the amendment: The following text replaces common modification text in the existing standard by the IEC text including changes in A1. It also includes the paragraph from the EN 60335-1:2012 starting by “Plugs and socket-outlets and their connecting devices….” Replace the existing text by the following:		P
24.1	Components shall comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply.		P
	Compliance with the EN standard for the relevant component does not necessarily ensure compliance with the requirements of this standard.		P
	Motors are not required to comply with EN 60034-1. They are tested as part of the appliance according to this standard.		P
	Relays shall be tested as part of the appliance according to this standard. They may be alternatively tested to EN 60730-1, in which case they shall also meet the additional requirements in EN 60335-1.		N/A

EN 60335-1: 2012/ A1 + A14+ A2 ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Unless otherwise specified, the requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance.		P
	Unless otherwise specified, components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard.		P
	Unless otherwise specified, the requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components.		P
	Components that have not been previously tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard.		P
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the EN standard for the relevant component need not be retested provided that		P
	— the severity specified in the component standard is not less than the severity specified in 30.2 of this standard, and		P
	— unless the pre-selection alternatives in 30.2 are used, the test report for the component states the values of te and ti. as required by EN 60695-2-11.		P
	If the above two conditions are not satisfied, the component is tested as part of the appliance		P
	Power electronic converter circuits are not required to comply with EN 62477-1. They are tested as part of the appliance according to this standard.		N/A
	Unless components have been previously tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9. For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9.		P

EN 60335-1: 2012/ A1 + A14+ A2 ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Components that have not been separately tested and found to comply with the relevant EN standard and components that are not marked or not used in accordance with their marking, are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard.		P
	Lamp-holders and starter-holders that have not been previously tested and found to comply with the relevant EN standard are tested as a part of the appliance and shall additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance. Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used.		N/A
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard.		P
	Plugs and socket-outlets and other connecting devices of interconnection cords shall not be interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if direct supply to these parts from the supply mains could give rise to a hazard.		N/A
	When an EN standard does not exist for a component, there are no additional tests specified.		P
EN 60335-1: 2012 /A14: 2019			
7	**Marking and instructions**		**—**
7.10	Add the following text after the first paragraph of the addition:		P
	A push-push button switch used for start and stop the operation shall not be used for other functions such as changing the motor speed.		P

EN 60335-1: 2012/ A1 + A14+ A2 ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	For hand-held appliances with rated power input 50 W or lower it is acceptable to have a push-push button for different functions including on / off if there is an immediate feedback to the user e.g. by tactile feedback or audible and visible feedback.		N/A
	NOTE Z1 An example of such a function is: slow/ fast / off.		N/A
	Where a push button can cycle through various modes during a prolonged push this is allowed as long as the appliance will switch off with a single short push action.		N/A
	Renumber the current NOTE Z1 and NOTE Z2 by NOTE Z2 and NOTE Z3.		N/A
	Replace the first sentence of NOTE Z2 (was NOTE Z1) by the following:		P
	Audible feedback is any audible response got immediately after the operation of the switch. The click of a switch can be accepted as an audible feedback provided that it is originated inside the switch that is operated and can be heard at a distance of 77 cm from the switch. The sound of the motor is regarded as an audible feedback.		P
	Add the following text after the third paragraph of the addition: Constructions with switches that have two different stable positions (meaning that it can be seen or felt when they have been pressed or rotated) are considered to have a tactile feedback.		P
8	**Protection against access to live parts**		—
8.1.1	Replace the first sentence of the replacement of the 3rd paragraph with the following:		P
	Test probe B and probe 18 of EN 61032 are applied with a force not exceeding 1 N, the appliance being in every possible position, except that appliances normally used on the floor and having a mass exceeding 40 kg are not tilted.3		P
8.1.3	Add the text “, test probe 18” after “test probe B,”		P
15	**Moisture resistance**		**—**
15.1.2	Put the text of the addition in italics.4		N/A

EN 60335-1: 2012/ A1 + A14+ A2 ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
20	**Stability and mechanical hazards**		—
20.2	In the second paragraph replace the word “movable” by “moving” and replace “main function” by “working function”.		N/A
22	**Construction**		—
22.12	Add to the first paragraph:		P
	Other parts that are intended to be detached during use, maintenance or cleaning (examples are batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers.		P
22.17	Add a new sentence to the requirement:		N/A
	This is not applicable to built-in appliances.		N/A
24	**Components**		—
24.1	Add before the last paragraph the following:		P
	NOTE Z3 For details of plugs used in CENELEC countries listed in IEC TR 60083 see Annex ZH.		P
25	**Supply connection and external flexible cords**		—
25.1	Addition Plugs and pins for insertion into socket outlets shall follow the relevant standards sheets in Annex ZH.		P
25.6	Delete the addition.		P
25.25	Replace the second sentence of the first paragraph and add the note: Dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are to be in accordance with the dimensions of the relevant plug standard.		P
	NOTE Z1 Common plugs and socket-outlets types in CENELEC countries as shown in Annex ZH.		P
32	**Radiation, toxicity and similar hazards**		—
	Delete in the third paragraph “EN 50366 or”		P
Annex ZA	Special national conditions		—
Annex ZB	A-deviations		—
Annex ZD	IEC and CENELEC code designations for flexible cords		—

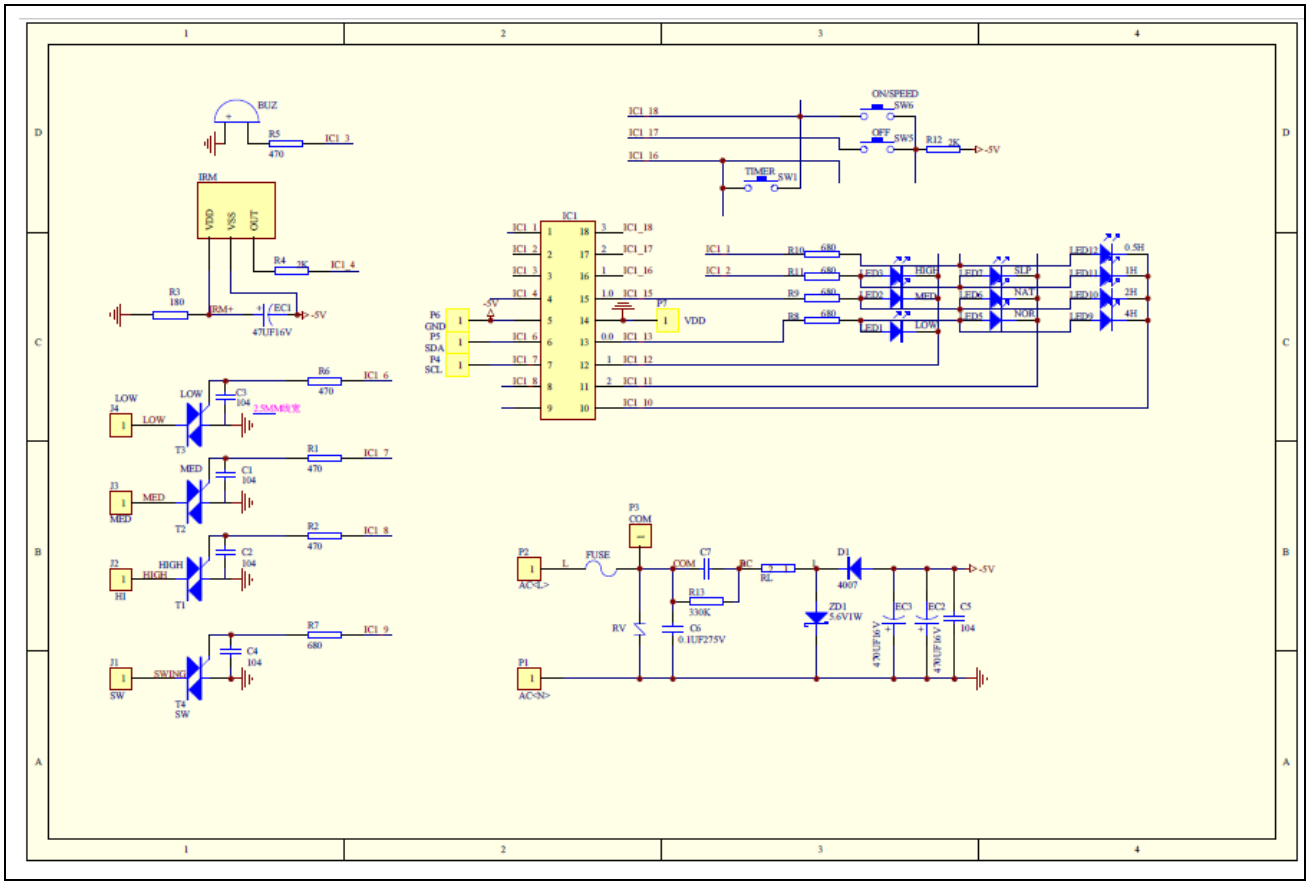
EN 60335-1: 2012/ A1 + A14+ A2 ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

Annex ZF	Criteria applied for the allocation of products covered by standards in the EN 60335 series under LVD or MD		—
Annex ZH	Common plug and socket-outlet types in CENELEC countries		—
Annex ZI	Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A		—
EN 60335-1: 2012 /A2: 2019			
7	**Marking and instructions**		**—**
7.101	Delete the paragraphs starting with “Devices used to start/stop….” until the end of the requirement “……by vulnerable persons.”. This includes Notes Z1 and Z2.		P
7.12.Z12	Delete the sub clause.		P
7.14.	Delete Note Z1.		P
22	**Construction**		**—**
22.12	Delete Note Z1		P
24	**Components**		**—**
24.Z1	Replacement		N/A
	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1.		P
25	**Supply connection and external flexible cords**		**—**
25.73	Delete the existing text starting “Halogen free thermoplastic……..” until ”……..designation H07ZZ-F). “		N/A
Annex ZC	**Normative references to international publications with their corresponding European publications**		**—**

---End of the Attachment---

Circuit diagram document

Detail of: Schematic diagram of alternative PCB (for models: FES-45C)



--- End of this Attachment ---

Attachment 4

Photo documentation

Type of equipment, model: Fan, FE-30, FE-35, FE-40, FE-50, FES-45C

Details of: Appearance, FES-45C

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Appearance, FES-45C **The handle should be covered by plastic.**

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Appearance, FES-45C

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Appearance, FES-45C

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Appearance, FES-45C

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Internal view for FES-45C

View:

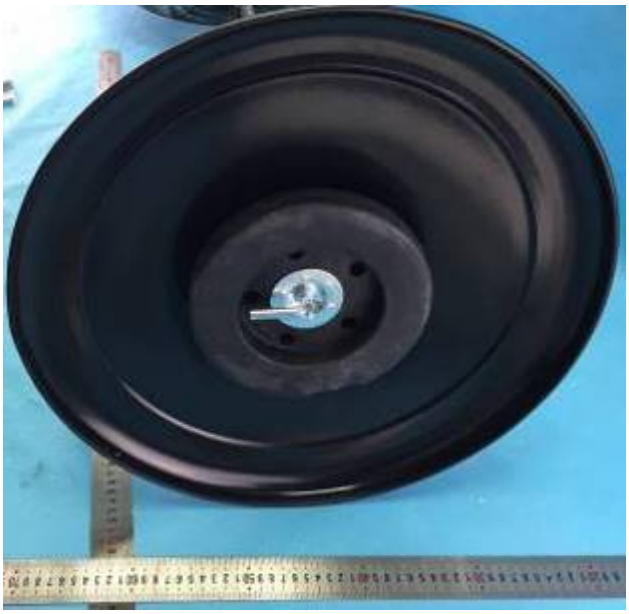
- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Appearance, FES-45C

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Alternative control box for FES-45C

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative control box for FES-45C

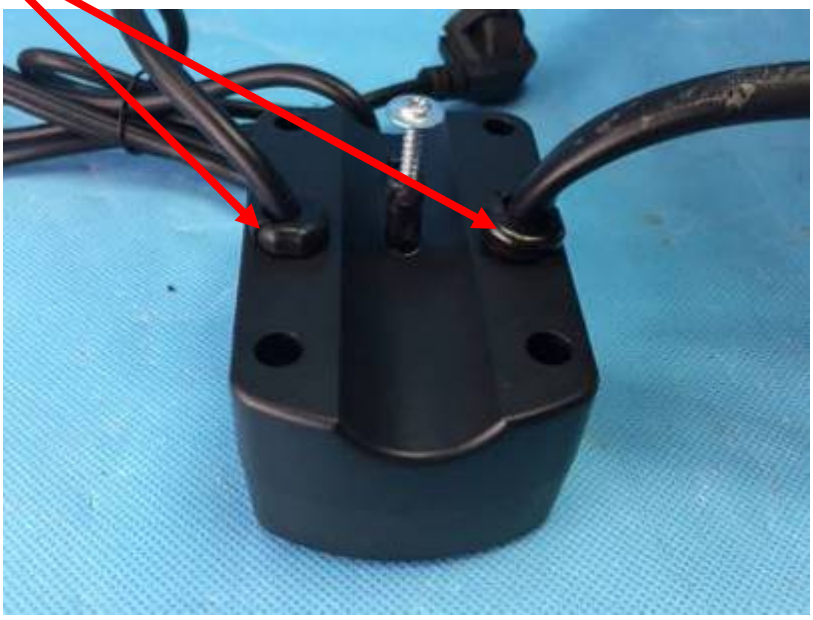
View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Cord sheath of alternative control box

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Attachment 4

Details of: Internal view of alternative control box construction and PCB

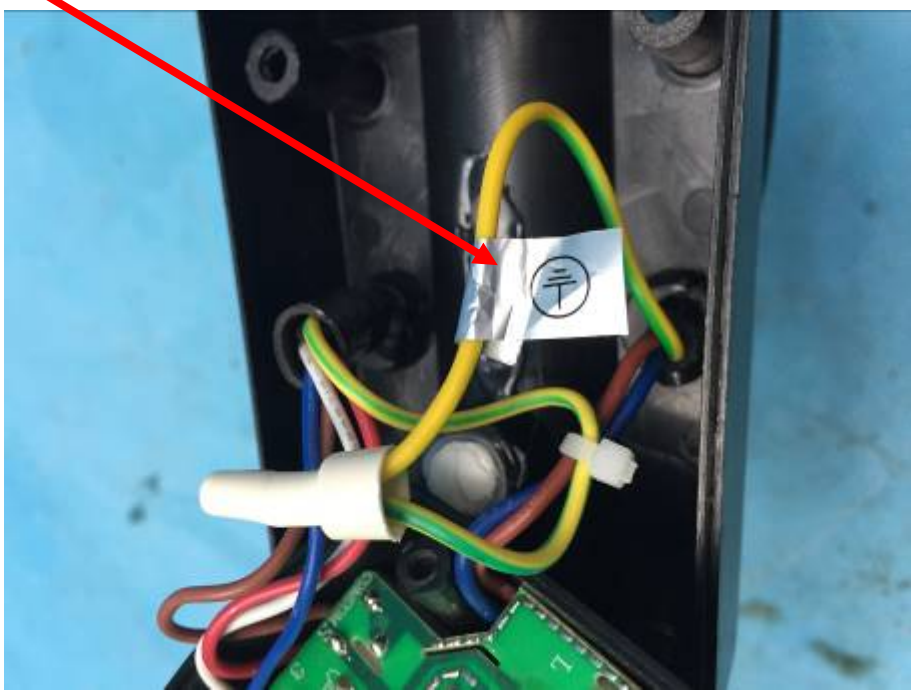
View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Earthing symbol view of alternative control box

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

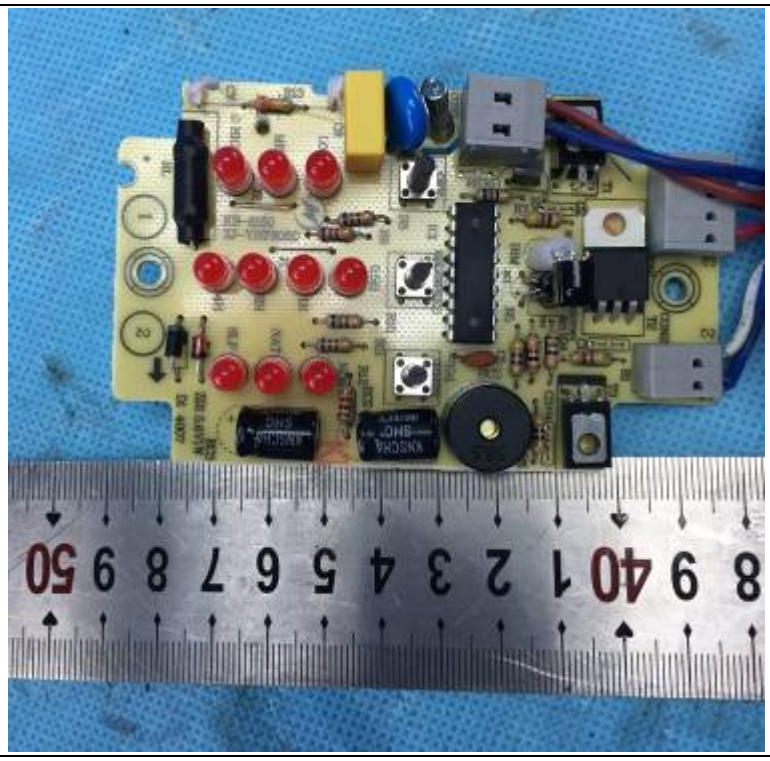


Attachment 4

Details of: Alternative PCB for FES-45C

View:

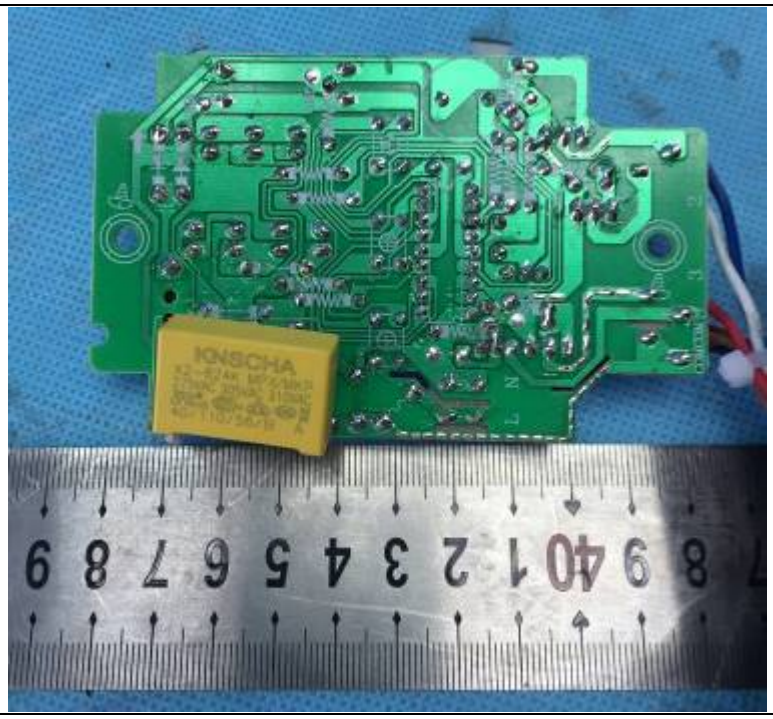
- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Alternative PCB for FES-45C

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Attachment 4

Details of: Alternative stand for FE-30

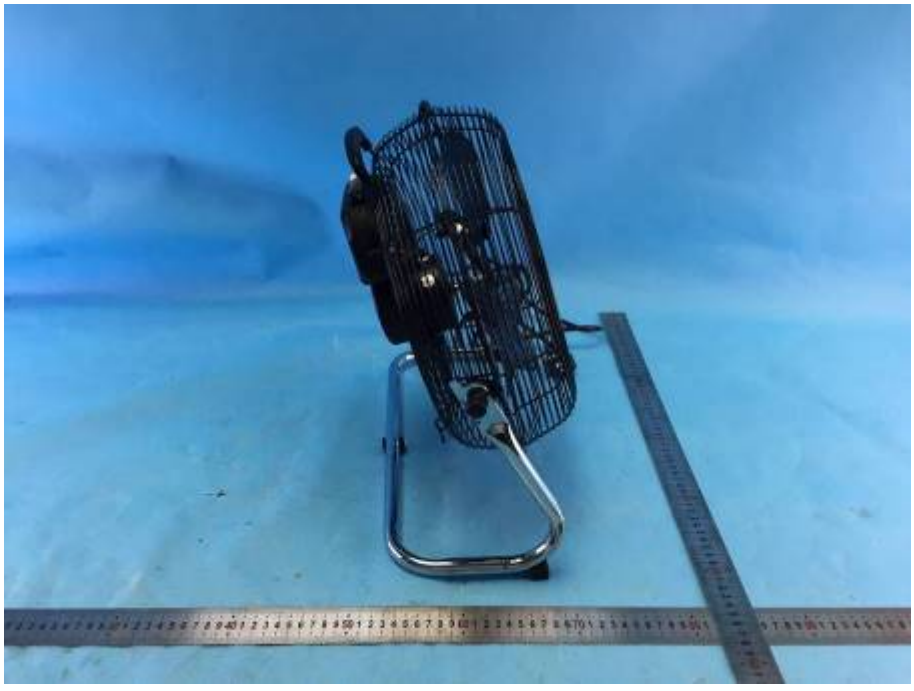
View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-30

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Attachment 4

Details of: Alternative stand for FE-30

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-30

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-30

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-30

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-35

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-35

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-35

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-35

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-35

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-35

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-40

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-40

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-40

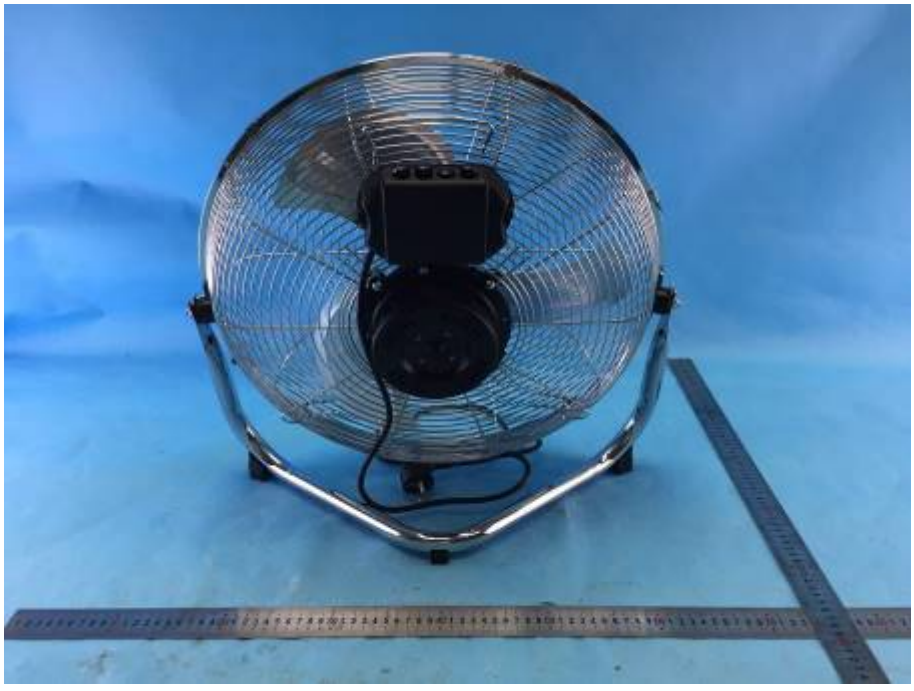
View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-40

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

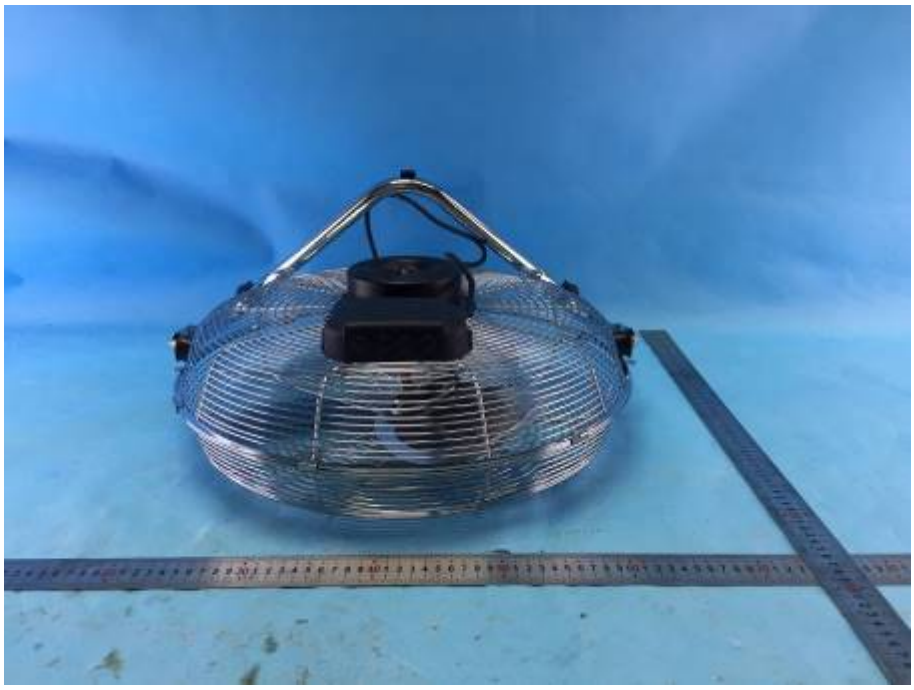


Attachment 4

Details of: Alternative stand for FE-40

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Alternative stand for FE-40

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-50

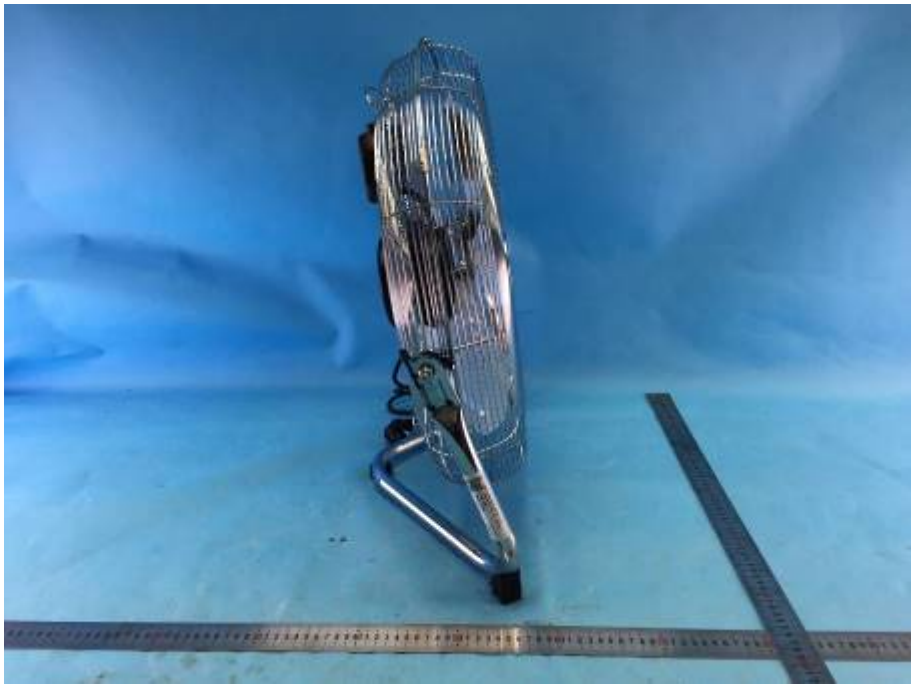
View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Details of: Alternative stand for FE-50

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

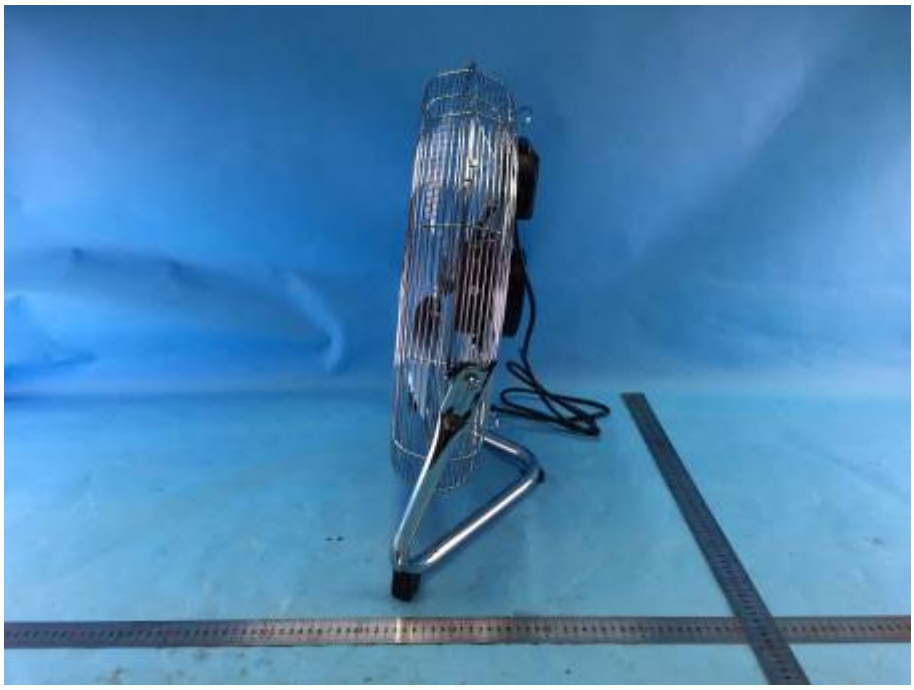


Attachment 4

Details of: Alternative stand for FE-50

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Alternative stand for FE-50

View:

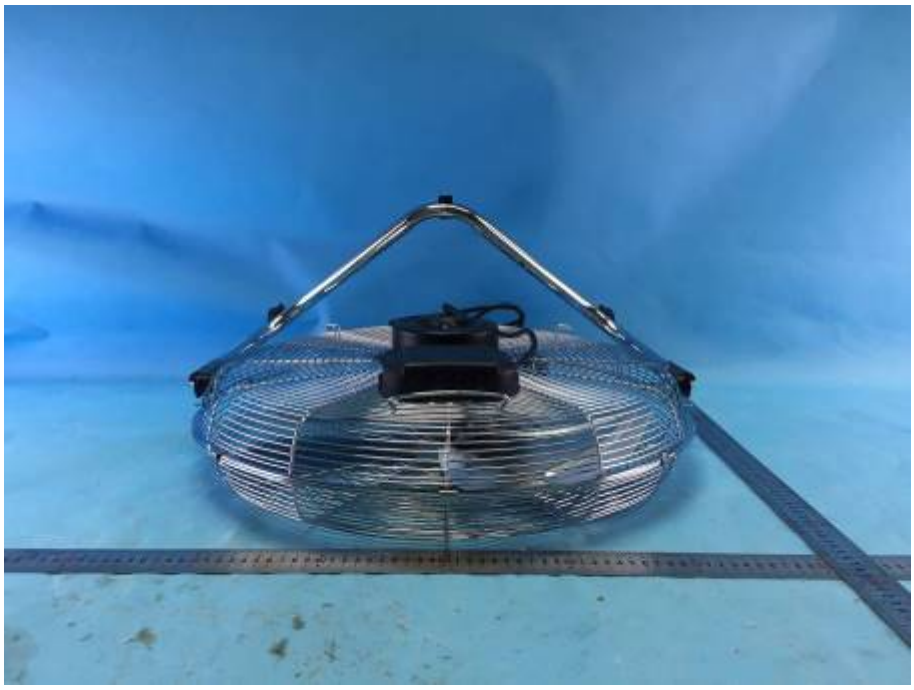
- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

Attachment 4

Details of: Alternative stand for FE-50

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Alternative stand for FE-50

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

--- End of this attachment ---

IEC60335_2_80I – ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-2-80 (AUSTRALIA / NEW ZEALAND) NATIONAL DIFFERENCES

(Household and similar electrical appliances – Safety – Part 2.80: Particular requirements for fans)

Differences according to.....:	AS/NZS 60335.2.80:2016 AS/NZS 60335.1:2011 + A1:2012 + A2:2014 + A3:2015 + A4:2017 + A5:2019
Attachment Form No.....:	AU_NZ_ND_IEC60335_2_80I
Attachment Originator.....:	NZ Electrotechnical Committee/Standards New Zealand
Master Attachment.....:	Date 2017-09-14

	National Differences		—
5	**GENERAL CONDITIONS FOR THE TESTS**		—
5.8.1	Variation: Test at a.c. 50Hz for a.c. only appliance (AS/NZS 60335.1:2011)		P
	Variation: Test at a.c. 50Hz or d.c., whichever is the more unfavourable supply for a.c. and d.c. appliance (AS/NZS 60335.1:2011)		N/A
6	**CLASSIFICATION**		—
6.1	Variation: Protection against electric shock: Class I, II, III (AS/NZS 60335.1:2011)	Class I	P
6.101	Variation Fans shall be classified as fans for tropical climates (AS/NZS 60335.2.80:2016)		P
7	**MARKING AND INSTRUCTIONS**		—
7.1	After the first paragraph of the requirement insert the following variation:		P
	Appliances intended for connection to the supply mains, other than class III appliances, are be marked with:		P
	- a rated voltage of at least: 230 V for single-phase appliances; 400 V for poly-phase appliances; or		N/A
	- a rated voltage range that includes: 230 V for single-phase appliances; 400 V for poly-phase appliances. (AS/NZS 60335.1:2011)	220 V – 240 V	P

IEC60335_2_80I – ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliance outlets and socket outlets accessible to the user		N/A
	- that are incorporated in appliances connected to the supply mains; and		N/A
	- that operate at rated voltage;		N/A
	The appliances shall be marked with their maximum outlet load in Watts. (AS/NZS 60335.1:2011/A3:2015)		N/A
	Max. Outlet load (W)……:		N/A
7.12.1	*Replace* the third dashed item in the first paragraph of the addition with the following variation.		N/A
	– that the fan is to be installed so that the blades are more than 2,1 m above the floor; (AS/NZS 60335.2.80:2016)		N/A
	Replace the second dashed item in the second paragraph of the addition with the following variation.		N/A
	– that the fan is to be installed so that the blades are more than 2,1 m above the floor; (AS/NZS 60335.2.80:2016)		N/A
7.13	Replace the requirement with the following variation:		P
	Instructions and other text required by this standard are written in English. (AS/NZS 60335.1:2011)		P
7.15	After the last paragraph of the requirement insert the following variation:		N/A
	The marking of the maximum outlet load is close to the appliance outlet or socket outlet. (AS/NZS 60335.1:2011/A3:2015)		N/A
10	**POWER INPUT AND CURRENT**		—
10.1	After the last paragraph of the test specification insert the following variation:		N/A
	Appliance outlets and socket outlets accessible to the user		N/A
	- that are incorporated in appliances connected to the supply mains; and		N/A
	- that operate at rated voltage;		N/A
	are not loaded during the test, however their contribution to the power input is considered to be the marked outlet load per appliance outlet or socket-outlet. (AS/NZS 60335.1:2011/A3:2015)		N/A
11	**HEATING**		—
11.7	After the first paragraph of the test specification insert the following variation:		N/A

IEC60335_2_80I – ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliance outlets and socket outlets accessible to the user are loaded with a resistive load that gives the marked outlet load in watts. (AS/NZS 60335.1:2011/A3:2015)		N/A
11.8	After the first paragraph of the test specification insert the following variation:		N/A
	The pins of plug connectors inserted into appliance outlets accessible to the user and plugs inserted into socket outlets accessible to the user has a temperature rise not exceeding 45 K. (AS/NZS 60335.1:2011/A3:2015)		N/A
	Temperature rise (K)……...……:		N/A
19	**ABNORMAL OPERATION**		—
19.13	After the seventh paragraph of the test specification insert the following variation:		N/A
	During and after the tests the no-load output voltage of an accessible safety extra-low voltage outlet or connector shall not have increased by more than 3 V or 10% of its no-load output voltage in normal use, whichever is higher. (AS/NZS 60335.1:2011/A5:2019)		N/A
	Voltage normal use (V)……...:		N/A
	Voltage abnormal operation (V)……:		N/A
	Deviation (%)……:		N/A
	During and after the tests the no-load output voltage of a USB outlet or connector shall not increase by more than 3 V or 10% of its no-load output voltage in normal use, whichever is higher. (AS/NZS 60335.1:2011/A5:2019)		N/A
	Voltage normal use (V)……...:		N/A
	Voltage abnormal operation (V)……:		N/A
	Deviation (%)……:		N/A
22	**CONSTRUCTION**		—
22.2	After the first paragraph of the requirement insert the following variation:		N/A
	For stationary appliances permanently connected to the fixed wiring, compliance with this requirement is considered to be met if the instruction concerning disconnection incorporated in the fixed wiring is in accordance with AS/NZS 3000. (AS/NZS 60335.1:2011/A3:2015)		N/A
22.3	Replace the first paragraph of the test specification with the following variation:		N/A

IEC60335_2_80I – ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance is checked by inserting the pins of the appliance into a socket-outlet capable of accepting a plug complying with Figure 2.1(a) of AS/NZS 3112. (AS/NZS 60335.1:2011)		N/A
	The socket-outlet has a horizontal pivot at a distance of 8 mm behind the engagement face of the socket-outlet and in the plane of the lower intersection of the centre lines of the contact apertures. (AS/NZS 60335.1:2011)		N/A
	Replace the third, fourth and fifth paragraphs of the test specification with the following variation:		N/A
	A new sample of the appliance complies with the tests in 2.13.9.2 of AS/NZS 3112 (AS/NZS 60335.1:2011)		N/A
22.201	Appliances having integral pins for insertion into socket outlets comply with the appropriate requirements in Annex J of AS/NZS 3112.		N/A
	Compliance is checked as specified in Annex J of AS/NZS 3112 (AS/NZS 60335.1:2011)		N/A
22.202	Appliance outlets and socket outlets accessible to the user		N/A
	- that are incorporated in appliances connected to the supply mains; and		N/A
	- that operate at rated voltage		N/A
	Shall be single-phase and have a current rating not exceeding 16 A. (AS/NZS 60335.1:2011/A3:2015)		N/A
	The socket outlets comply with AS/NZS 3112; (AS/NZS 60335.1:2011/A3:2015)		N/A
	accept a 3-pin, flat-pin plug as described in figure 2.1(a1) of AS/NZS 3112 (AS/NZS 60335.1:2011/A3:2015)		N/A
	The appliance outlets and socket outlets shall be protected by one of the following protection devices that has a current rating not exceeding the current rating of the appliance outlet or socket-outlet:		N/A
	- a circuit breaker for equipment complying with IEC 60934; (AS/NZS 60335.1:2011/A3:2015)		N/A
	- a manually resettable trip-free or cycling trip-free overcurrent protection device; (AS/NZS 60335.1:2011/A3:2015)		N/A

IEC60335_2_80I – ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- a non-user replaceable fuse-link.		N/A
	Current of outlet (A)……..:		N/A
	Current of protection device (A)……..:		N/A
	The protection device shall be placed behind a non-detachable cover.		N/A
	The actuating member of the circuit breaker and the manually resettable protection device may be accessible. (AS/NZS 60335.1:2011/A3:2015)		N/A
	The current rating of the appliance outlets and socket outlets is obtained from the marked outlet load in watts divided by the rated voltage.		N/A
	Load of outlet (W)……...……..:		N/A
	Rated voltage (V)……..:		N/A
	Current of outlet (A)……..:		N/A
	For a manually resettable trip-free or cycling trip-free overcurrent protection device:		N/A
	The device is operated at rated voltage at 136% of its current rating, in an ambient temperature of 23°C ± 2°C in a draught-free environment.		N/A
	Rated voltage (V)……..:		N/A
	Current of outlet (A)……..:		N/A
	Test current (A)……..……..:		N/A
	Ambient temperature (°C)…..…..……..:		N/A
	The device operates to interrupt the current within 2 h. (AS/NZS 60335.1:2011/A3:2015)		N/A
	Overload condition existed for (_h,_min, _sec)…..:		N/A
	The device is operated at rated voltage at 600% of its current rating in an ambient temperature of 23°C ± 2°C in a draught-free environment		N/A
	Rated voltage (V)……..:		N/A
	Current of outlet (A)……..:		N/A
	Test current (A)……..……..:		N/A
	Ambient temperature (°C)…..…..……..:		N/A
	The device shall operate to interrupt the current within 5 s. (AS/NZS 60335.1:2011/A3:2015)		N/A
	Overload condition existed for (sec)……....:		N/A

IEC60335_2_80I – ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Immediately following the overcurrent tests, the test of clause 16.3 is applied, and the device shall comply with the specified requirements of the test.		N/A
	The device shall comply with the ball pressure test of 30.1 carried out at 160 °C. (AS/NZS 60335.1:2011/A3:2015)		N/A
	Plastic material type……:		N/A
	Impression diameter (mm)……..:		N/A
	The device shall comply with the glow-wire test of 30.2.3.1 with a test severity of 960 °C. (AS/NZS 60335.1:2011/A3:2015)		N/A
	Plastic material type……..……:		N/A
	Time of ignition (sec)……..……..:		N/A
	Time of extinguish (sec)……..……..:		N/A
	Specified layer placed underneath the test specimen does not ignite. (AS/NZS 60335.1:2011/A3:2015)		N/A
25	**SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS**		—
25.1	Supply cords for single-phase portable appliances intended for direct connection to the supply mains, are fitted with an appropriate plug complying with AS/NZS 3112. (AS/NZS 60335.1:2011)		P
Table 11	In footnote *a insert* the following variation		P
	However, they cannot be used in class I appliances. (AS/NZS 60335.1:2011)		P
	SPECIAL NATIONAL CONDITIONS		—
	Australia		—
5	**GENERAL CONDITIONS FOR THE TESTS**		—
5.201	Variation: For appliances, other than class III appliances, that are intended for connections to the supply mains and that are not marked with:		P
	- a rated voltage of at least 240 V for single-phase appliances and at least 415 V for three-phase appliances, or		N/A
	- a rated voltage range that includes 240 V for single-phase appliances and 415 V for three-phase appliances,		P

IEC60335_2_80I – ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	the rated voltage is equal to 240 V for single-phase appliances and 415 V for three phase appliances,		N/A
	and the upper limit of the rated voltage range is equal to 240 V for single-phase appliances and 415V for three-phase appliances. (AS/NZS 60335.1:2011)		N/A
	In addition, the rated current or rated power input is equal to the calculated value corresponding to 240 V for single-phase appliances and 415 V for three-phase appliances as appropriate (AS/NZS 60335.1:2011)		N/A
24	**COMPONENTS**		—
24.1.7	Addition: Telecommunication interface circuitry must comply with the Telecom Labeling Notice issued under the Telecommunications Act instead of IEC 62151 (AS/NZS 60335.1:2011)		N/A

--End of the Attachment--