TEST REPORT

IEC 60335-2-32

Part 1: Safety of household and similar electrical appliances
Part 2-32: Particular requirements for massage appliances

Report Number.....:	ZHT-231113015S
Date of issue.....:	Nov. 16, 2023
Total number of pages.....:	79
Testing Laboratory.....:	**Guangdong Zhonghan Testing Technology Co., Ltd.**
Address.....:	Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Applicant's name.....:	**Shenzhen Aiersha Technology Co.,Ltd**
Address.....:	503, Coastal Future Incubation Center, Heping Road, Longhua District.Shenzhen, Guangdong Province, China
Test specification	
Standard.....:	EN 60335-1:2012+A11:2014+A13:2017+A1:2019 +A2:2019+A14:2019+A15:2021 EN IEC 60335-2-32:2021 EN 62233:2008
Test procedure .....:	Test report
Non-standard test method .....:	N/A
Test Report Form	
Test Report Form No.....:	IEC60335_2_32F
Test Report Form(s) Originator.....:	LCIE
Master TRF.....:	Dated 2013-11

Test item description.....:	Massager
Trademark.....:	/
Manufacturer.....:	Shenzhen Aiersha Technology Co.,Ltd 503, Coastal Future Incubation Center, Heping Road, Longhua District.Shenzhen, Guangdong Province, China
Model/Type reference.....:	1816 1817, 1818, 1819, 1825, 1829, 1830, 1831, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844
Ratings.....:	Input: 5V⎓, 1A; Internal rechargeable battery 3.7V

Testing procedure and testing location:		
☒ **Testing Laboratory:**	Guangdong Zhonghan Testing Technology Co., Ltd.	
Testing location/ address.....:	Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China	
☐ **Associated Testing Laboratory:**		
Testing location/ address.....:		
Tested by (name + signature).....:	Laney Xie	
Reviewed by (name + signature).....:	Summer Yang	
Approved by (name + signature).....:	Levi Lee	
☐ **Testing procedure: TMP/CTF Stage 1:**		
Testing location/ address.....:		
Tested by (name + signature).....:		
Approved by (name + signature).....:		
☐ **Testing procedure: WMT/CTF Stage 2:**		
Testing location/ address.....:		
Tested by (name + signature).....:		
Witnessed by (name + signature).....:		
Approved by (name + signature).....:		
☐ **Testing procedure: SMT/CTF Stage 3 or 4:**		
Testing location/ address.....:		
Tested by (name + signature).....:		
Witnessed by (name + signature).....:		
Approved by (name + signature).....:		
Supervised by (name + signature).....:		

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

-- Attachment I : 16 pages for EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

-- Attachment II: 3 pages for Photo documentation.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Test clause see below.	Guangdong Zhonghan Testing Technology Co.,Ltd. Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Copy of marking plate.

The artwork below may be only a draft.

Massager

Model: 1816

Input: 5V⎓, 1A; Internal rechargeable battery 3.7V

Importer: XXXXXX
Address: XXXXXX
Manufacturer: Shenzhen Aiersha Technology Co.,Ltd
Address: 503, Coastal Future Incubation Center, Heping Road, Longhua District.Shenzhen, Guangdong Province, China
Made in China

Remark on above marking:

1, The height of CE symbols is more than 5 mm;

2, The height of WEEE symbols is more than 7 mm;

3, The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.

Test item particulars..... :	
Classification of installation and use.....:	Hand-held appliance
Supply Connection.....:	Power by DC5V or internal battery, not mains connected
Possible test case verdicts:	
- test case does not apply to the test object.....:	N
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing..... :	
Date of receipt of test item.....:	Nov 13, 2023
Date (s) of performance of tests.....:	Nov 13, 2023 to Nov 17, 2023

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.

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.

General product information:

1.The equipment is a Massager for general use.
2.All models are same as 1816 except model name only, all tests are carried out on 1816.
3.Appliances weight:: Appr.0.7Kg

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		-
	Tests performed according to cl. 5, e.g. nature of supply, sequence of testing, etc.		P
6	CLASSIFICATION		-
6.1	Protection against electric shock: Class I, II, III :	Class III	P
	--Portable appliances should be classes Class II or Class III(EN6335-2-32)	Class III	P
	--Stationary appliances should be classes Class I ,Class II or Class III(IEC 60335-2-32)		N
6.2	Protection against harmful ingress of water	IPX0	N
7	MARKING		-
7.1	Rated voltage or voltage range (V) :	5V	P
	Single-phase appliances: 230 V covered		N
	Multi-phase appliances: 400 V covered		N
	Nature of supply	⎓	P
	Rated frequency or frequency range (Hz) :		N
	Rated input or rated current		P
	Manufacturer's or responsible vendor's name, trademark or identification mark	Shenzhen Aiersha Technology Co.,Ltd	P
	Model or type reference	See marking plate	P
	Symbol for Class II		N
	IP number	IPX0	N
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains		N
7.2	Warning for stationary appliances	No such stationary appliance	N
	Warning placed in vicinity of terminal cover	Not placed in vicinity of terminal cover	N
7.3	Range of rated values correctly marked		N
7.4	Voltage setting clearly discernible	No such setting	N
7.5	Marking of rated input for each rated voltage		P
	Marking for upper and lower limits of rated input		P
7.6	Correct symbols used	See marking label	P
7.7	Correct connection diagram, fixed to the appliance		N
7.8	Not for type Z attachment:		-

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	- marking of terminals for the neutral conductor (N)		N
	- marking of earthing terminals		N
	- marking not placed on removable parts		N
	- marking of terminal for single-pole protective device	No such protective device	N
7.9	Marking or placing of switches which may cause a hazard		P
7.10	Indications of switches and regulating devices by use of figures, letters or other		N
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N
7.11	Indication for direction of adjustment of controls		N
7.12	Instructions for safe use provided	Please see product manual	P
	The instructions for appliances having heated parts in contact with the skin shall include the substance of the following		P
	The appliance has a heated surface. Persons insensitive to heat must be careful when using the appliance.		P
7.12.1	Sufficient details for installation or maintenance supplied		N
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		N
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions stating that the fixed wiring must be protected		N
7.12.4	Information with regard to built-in:	No built - in appliance	N
	- dimensions of space		N
	- dimensions and position of supporting means		N
	- distances between parts and surrounding structure		N
	- dimensions of ventilation openings and arrangement		N
	- connection to supply mains and interconnection of separate components		N
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N
	a switch complying with 24.3		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
7.12.5	Replacement cord, type X attachment		N
	Replacement cord, type Y attachment		N
	Replacement cord, type Z attachment		N
7.12.6	Caution in the instructions for heating appliances with a non-self-resetting thermal cut-out		N
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N
7.12.8	Instructions for appliances connected to the water mains:		N
	- max. inlet water pressure (Pa):		N
	- min. inlet water pressure, if necessary (Pa):		N
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N
7.13	Instructions and other texts in official language	In English	P
7.14	Marking easily legible and durable	After testing, legible and durable	P
7.15	Marking on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		P
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		N
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		-
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	All positions; detachable parts removed		N
	Removal of lamps: protection against contact with live parts	No such lamps	N
	Use of test probe B of IEC 61032: no contact with live parts		P

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
8.1.2	Use of test probe 13 of IEC 61032 through openings in class 0 appliances and class II appliances/ constructions: no contact with live parts		N
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N
8.1.3	Use of test probe: no contact with live parts of visible glowing heating elements	No visible glowing heating elements	N
8.1.4	Accessible part not considered live if:		-
	- extra-low a.c. voltage: peak values not exceeding 42,4 V		N
	- extra-low d.c. voltage: not exceeding 42,4 V	Input DC5V	P
	- or separated from live parts by protective impedance, d.c. current not exceeding 2 mA		N
	- or separated from live parts by protective impedance, a.c. peak value not exceeding 0,7 mA		N
	- for peak value 42,4 V up to and including 450 V capacitance not exceeding 0,1 μF		N
	- for peak value 450 V up to and including 15 kV capacitance not exceeding 0,1 μF		N
	- for voltages over 15 kV, the energy of the discharge shall not exceed 350 mJ		N
	All energized parts in foot massage appliances that use water are considered to be live parts.		N
8.1.5	Live parts protected at least by basic insulation before installation or assembly:	No such constructions	-
	- built-in appliances		N
	- fixed appliances		N
	- separate units		N
8.2	Class II appliances and constructions adequately protected against accidental contact with basic insulation and metal parts separated from live parts with only basic insulation		N
	Only possible to touch parts separated from live parts by double or reinforced insulation		N
10	POWER INPUT AND CURRENT		-
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1	(see appended table)	N
	Test for an appliance with one or more rated voltage ranges		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2	(see appended table)	P
	Test for an appliance with one or more rated voltage ranges		P
11	HEATING		-
11.1	No excessive temperatures in normal use	Comply with requirements	P
11.2	Placing and mounting of appliance as described		P
	Combined appliances are positioned as specified for motor-operated appliances.		N
11.3	Temperature rises determined by thermocouples or resistance method	By thermocouples method	P
11.4	Heating appliances operated under normal operation at 1,15 times rated power input		N
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0,94 and 1,06 times rated voltage		P
11.6	Combined appliances operated under normal operation, supply voltage at most unfavourable voltage between 0,94 and 1,06 times rated voltage		N
11.7	Tests carried out as specified	See appended table	P
	Hand-held appliances are operated for 20 min.(IEC 60335-2-32)		N
	Other appliances are operated until steady conditions are established. IEC 60335-2-32)		P
11.8	Temperature rises not exceeding values in table 3	(see appended tables)	P
	Sealing compound does not flow out		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N
	The temperature rise of parts in contact with skin or hair shall not exceed the limits specified for handles that are continuously held.(IEC 60335-2-32)		P
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		-
13.1	Leakage current not excessive and electric strength adequate		N
	Heating appliances operated at 1.15 times rated power input:		N
	Motor-operated appliances and combined appliances supplied at 1.06 times rated voltage:		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Protective impedance and radio interference filters disconnected before carrying out the tests		N
13.2	Leakage current measured by means of the circuit described in figure 4 of IEC 60990		N
	Leakage current measurements	(see appended table)	N
	For stationary class I appliances, except fixed appliances, the leakage current shall not exceed 0,75 mA.(IEC 60335-2-32)		N
13.3	Electric strength test of insulation		P
	No breakdown during the test		P
14	TRANSIENT OVERVOLTAGES		-
	Appliances withstand the transient overvoltages to which they may be subjected		N
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6		N
	No flashover during the test, unless of functional insulation		N
	In case of flashover of functional insulation, the appliance complies with clause 19 with the clearance short circuited		N
15	MOISTURE RESISTANCE		-
15.1	Enclosure provides the degree of moisture protection according to classification of appliance		N
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N
	No trace of water on insulation which can result in a reduction of clearances and creepage distances below values specified in clause 29		N
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529:		N
	Water valves in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N
	Built-in appliance installed according to the manufacturer's instruction		N
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube		N
	However, 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
	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		N
	For IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N
	Appliances with type X attachment fitted with a flexible cord as described		N
	Detachable parts tested as specified		N
15.2	Spillage of liquid does not affect the electrical insulation		N
	Appliances with type X attachment fitted with a flexible cord as described		N
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N
	Detachable parts removed		N
	Overfilling test with additional amount of water, over a period of 1 min (l):		N
	The appliance withstands the electric strength test of 16.3		N
	No trace of water on insulation that can result in a reduction of clearances and creepage distances below values specified in clause 29		N
	spillage tests with a deviation (°) from the normal position:		N
	Water filled foot massagers are completely filled with water containing approximately 1 % NaCl and are then emptied within 30 s by being tilted or overturned in the most unfavourable way		N
15.3	Humidity treatment for 48 h	25°C, 48H, 93%R.H.	P
	Withstanding the test of Cl. 16		P

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		-
16.1	No excessive leakage current and adequate insulation and electric strength (tests 16.2 and 16.3)		N
16.2	Leakage current measurements		N
	For stationary class I appliances, except fixed appliances, the leakage current shall not exceed 0.75 mA (IEC 60335-2-32)		N
16.3	Electric strength tests (values in table 7)		P
	No breakdown during the tests		P
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		-
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use		N
	Appliance supplied with 1,06 or 0,94 times rated voltage and the most unfavourable short-circuit or overload likely to occur in normal use applied		N
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		N
	Temperature of the winding not exceeding the value specified in table 8		N
	however limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N
18	ENDURANCE		-
	Requirements and tests are specified in part 2 when necessary		N
19	ABNORMAL OPERATION		-
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe	(see appended table)	N
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N
	Appliances incorporating a liquid container that has to be filled by the user are also subjected to the test of 19.101.(IEC 60335-2-32)		N
19.2	Test of appliance with heating elements with restricted heat dissipation; test voltage (V): power input of 0,85 times rated power input :	(see appended table)	N
19.3	Test of 19.2 repeated; test voltage (V): power input of 1,24 times rated power input :		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
19.4	Test conditions as in Cl. 11, the power input being 1,15 times rated power input, any control limiting the temperature during tests of Cl. 11 short- circuited		N
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the elements sheath		N
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N
19.6	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1,5 times working voltage is reached or until the PTC heating element ruptures		N
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque or locking moving parts of other appliances		P
	Locked rotor, motor capacitors open-circuited or short-circuited, if required		P
	Locked rotor, capacitors open-circuited one at a time		N
	Test repeated with capacitors short-circuited one at a time, if required		N
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed		N
	Other appliances supplied with rated voltage for a period as specified		N
	Winding temperatures not exceeding values specified in table 8		P
	Appliances intended to be used under the feet of a sitting person, massage pads, chairs and beds are operated until steady conditions are established. Other appliances are operated for 30s. (IEC 60335-2-32)		P
19.8	Three- phase motors operated at rated voltage with one phase disconnected	No such three-phase motors	N
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Winding temperatures not exceeding values as specified		N
19.10	Series motor operated at 1,3 times rated voltage for 1 min	No such series motor	N
	Parts not ejected from the appliance during test		N
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 they comply with the conditions specified in 19.11.1		P
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.3 and 19.11.4		N
	Appliances having a switch with an off position obtained by electronic disconnection, or a switch placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8		N
19.11.1	Before applying the fault conditions a) to f) in 19.11.2, it is checked if circuits or parts of circuit meet both of the following conditions:		-
	- 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		N
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction in other parts of the appliance does not rely on the correct functioning of the electronic circuit		N
19.11.2	Fault conditions applied one at a time, the appliance operated under conditions specified in cl. 11, but supplied at rated voltage, the duration of the tests as specified:		-
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in 29		P
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless they comply with IEC 60384-14		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits. This fault condition is not applied between the two circuits of an optocoupler		N
	e) failure of triacs in the diode mode		P
	f) failure of an integrated circuit		P
	g) failure of an electronic power switching device		P

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to f) of 19.11.2		N
	During and after each test the following is checked:		P
	- the temperature rise 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
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided all three of the following conditions are met:		-
	- the material of the printed circuit board withstands the burning test of annex E		N
	- any loosened conductor does not reduce the clearances or creepage distances between live parts and accessible metal parts below the values specified in cl. 29		N
	- the appliance withstands the tests of 19.11.2 with open-circuited conductor bridged		N
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		N
	a device that can be placed in the stand-by mode,		N
	subjected to the tests of 19.11.4.1 to 19.11.4.7		N
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, except that		N
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		N
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		N
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		N
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		N
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		N
	Earthed heating elements in class I appliances disconnected		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		N
19.11.4.6	The appliance is subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-11		N
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		N
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduces to a level such that the appliance ceases to respond or a programmable component cease to operate.		N
	The appliance continues to operate normally or requires a manual operation to restart		N
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 127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A) :		N
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts	Comply with requirement	P
	Temperature rises not exceeding the values shown in table 7		P
	Enclosures not deformed to such an extent that compliance with Cl. 8 is impaired		P
	Appliance still operable and complying with 20.2		P
	Appliance, other than Class III, withstands the electric strength test of 16.3, however, the test voltage being:		-
	- basic insulation: 1250 V		N
	- supplementary insulation: 1750 V		N
	- reinforced insulation: 3000 V		N
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstanding the electric strength test of 16.3. the test voltage being twice the working voltage		N
	The appliance does not undergo a dangerous malfunction, and		N
	no failure of protective electronic circuits, if the appliance is still operable		N
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		N
	- do not become operational, or		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N
	During the test of 19.101, the temperature rise of the surface of the container shall not exceed 60K(IEC 60335-2-32)	No container used	N
19.14	Appliances operated under the conditions of Clause 11. Contactors or relays contacts operating under the conditions of clause 11 short-circuited		N
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied		N
19.101	Appliances incorporating a liquid container which has to be filled by the user during normal use are supplied at rated voltage and operated without liquid (IEC 60335-2-32)	No container used	N
20	STABILITY AND MECHANICAL HAZARDS		-
20.1	Adequate stability		N
	Tilting test through an angle of 10° (appliance placed on an inclined plane/horizontal plane); appliance does not overturn		N
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15		N
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N
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		P
	Adequate mechanical strength and fixing of protective enclosures		P
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, if unexpectedly reclosed	No such devices	N
	Not possible to touch dangerous moving parts with test finger		P
21	MECHANICAL STRENGTH		-
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying blows to the appliance in accordance with test probe of IEC 60068-2-75, spring hammer test, impact energy 0,5 J		P

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	If necessary, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N
	If necessary, repetition of groups of three blows on a new sample		N
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		N
	The insulation is tested as specified, unless		N
	the thickness of supplementary insulation is at least 1 mm and reinforced insulation is at least 2 mm		N
	Appliances intended to be used under the feet of a sitting person are loaded as specified for normal operation but with mass increased to 90kg which is applied for 30s (IEC 60335-2-32)		N
21.101	Test described (IEC 60335-2-32)		P
	The appliance shall not be damaged to such an extent that compliance with 8.1 and Clause 29 is impaired.		P
22	CONSTRUCTION		-
22.1	Appliance marked with the first numeral of the IP system: relevant requirements of IEC 529 are fulfilled	IPX0	N
22.2	Stationary appliance: means to provide all-pole disconnection from the supply provided, the following means being available:		-
	- a supply cord fitted with a plug		N
	- a switch complying with 24.3		N
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided		N
	- an appliance coupler		N
	Single-phase Class I appliance with heating elements, intended to be permanently connected to fixed wiring, incorporating single-pole switches or single-pole protective devices for the disconnection of the heating element(s): the switches/devices being connected in the phase conductor		N
22.3	Appliance provided with pins: no undue strain on socket-outlets		N
	Applied torque not exceeding 0,25 Nm		N
	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

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating unless rotating does not impair compliance with the standard		N
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N
22.5	No risk of electric shock when touching the pins of the plug		N
22.6	Electrical insulation not affected by condensing water or leaking liquid		N
	Electrical insulation of Class II appliances not affected in case of a hose rupture or seal leak		N
22.7	Appliances containing liquid or gases in normal use shall be against the risk of excessive pressure		N
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 which are likely to be cleaned in normal use	No such compartments	N
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances	Comply with requirements	P
	Adequate insulating properties of oil or grease to which insulation is exposed	No such parts	N
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		N
	Non-self resetting thermal motor protectors have a trip-free action, unless		N
	They are voltage maintained		N
	Location or protection of reset buttons of non-self-resetting controls is so that accidental resetting is unlikely		N
22.11	Reliable fixing of non-detachable parts which 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		P
	No deterioration of the fixing properties of snap-in devices used in parts which are likely to be removed during installation or servicing		P
	Tests		P
22.12	Handles, knobs etc. fixed in a reliable manner		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		N
	Axial force 15 N applied to parts, the shape of which being so that an axial pull is unlikely to be applied		N
	Axial force 30 N applied to parts, the shape of which being so that an axial pull is likely to be applied		N
22.13	Unlikely that handles, when gripped as in normal use, make the operators hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		N
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self tapping screws etc., liable 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	No such device	N
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands, no undue wear of contacts	No such devices	N
	Cord reel tested with 6000 operations, as specified		N
	Electric strength test of 16.3, voltage of 1000 V applied		N
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner	No such construction	P
22.18	Current-carrying parts and other metal parts resistant to corrosion under normal conditions of use		P
22.19	Driving belts not used as electrical insulation		N
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless material used is non-corrosive, non-hygroscopic and non-combustible	No thermal insulation	P
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless impregnated		N
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N
22.22	Asbestos not used in the construction of the appliance	No asbestos	P

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
22.23	Oils containing polychlorinated biphenyl (PCB) not used	No oils	P
22.24	Bare heating elements adequately supported		N
	In case of rupture, the heating conductor is unlikely to come in contact with earthed metal parts or accessible metal parts		N
22.25	Sagging heating conductors cannot come into contact with accessible metal parts	No such parts	N
22.26	The insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N
22.27	Parts connected by protective impedance separated by double or reinforced insulation	No such protective impedance	N
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	No such construction	N
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of protection against electric shock is maintained after installation		N
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		N
	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
22.31	Creepage distances and clearances over supplementary and reinforced insulation not reduced below values specified in 29.1 as a result of wear		N
	Creepage distances and clearances over supplementary or reinforced insulation not reduced to less than 50% of values specified in 29.1 if wires, screws etc. becomes loose		N
22.32	Supplementary and reinforced insulation designed or protected against deposition of dirt or dust		N
	Ceramic material not tightly sintered, similar material or beads alone not used as supplementary or reinforced insulation		N
	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 29.1	No such device	N
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
22.33	Conductive liquids which are or may become accessible in normal use are not in direct contact with live parts	No such conductive liquids	N
	Electrodes not used for heating liquids		N
	Conductive liquids are not in direct contact with basic insulation or reinforced insulation in Class II constructions		N
	Conductive liquids in direct contact with live parts shall not be in contact with reinforced insulation for Class II constructions		N
22.34	Shafts of operating knobs, handles, levers etc. not live, unless the shaft is not accessible when the part is removed		N
22.35	Handles, levers and knobs, held or actuated in normal use, not becoming live in the event of an insulation fault		N
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of an insulation fault, they are either adequately covered by insulation material, or their accessible parts are separated from their shafts or fixings by supplementary insulation		N
	This requirement does not apply to handles, levers and knobs on stationary appliances other than those of electrical components, provided they are either reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N
22.36	Handles continuously held in the hand in normal use are so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless they are separated from live parts by double or reinforced insulation		N
22.37	Capacitors in Class II appliances not connected to accessible metal parts, unless complying with 22.42	No such capacitors	N
	Metal casings of capacitors in Class II appliances separated from accessible metal parts by supplementary insulation, unless complying with 22.42		N
22.38	Capacitors not connected between the contacts of a thermal cut-out		N
22.39	Lamp holders used only for the connection of lamps		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
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
	Unless the appliance can operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch. The actuating member of the switch being easily visible and accessible.		N
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N
22.44	Appliances shall not have an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.4 due to deformation as a result of an external force applied to the enclosure		N
22.46	Software used in protective electronic circuits is software class B or C :		N
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N
	No leakage from any part, including any inlet water hose		N
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N
22.49	For remote operation, the duration of operation shall be set before the appliance can be started, unless		N
	the appliance switches off automatically or can operate continuously without hazard		N
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N
22.51	A control on the appliance being manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	There is a visual indication showing that the appliance is adjusted for remote operation		N
	Manual setting and visual indication not necessary on appliances that can operate as follows, without giving rise to a hazard:		N
	- operate continuously,		N
	- operate automatically, or		N
	- be operated remotely		N
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
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
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N
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 :		N
	The requirement concerning position does not preclude use of a push on push off switch		N
	An indication when the device has been operated is given by:		N
	– tactile feedback from the actuator or from the appliance, or		N
	– reduction in heat output; or		N
	– audible and visible feedback		N
22.56	Detachable power supply part provided with the part of class III construction		N
22.57	The properties of non-metallic materials do not degrade from exposure to UV-C radiation, as specified in Annex T		N
	This requirement does not apply to glass, ceramics or similar materials		N
22.101	Appliance shall be constructed so that hair cannot be drawn into appliance or be entangled in moving parts(IEC 60335-2-32)	Appliance checked ok	P
22.102	Appliance that use water and I which air is circulated shall be constructed so that the water cannot penetrate into contact with live parts or basic insulation (IEC 60335-2-32)		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
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		N
	Wiring effectively prevented from coming into contact with moving parts		N
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges or corners	No such materials	N
	Beads inside flexible metal conduits contained within an insulating sleeve		N
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		N
	Flexible metallic tubes not causing damage to insulation of conductors	No flexible metallic tubes	N
	Open-coil springs not used		N
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N
	No damage after 10 000 flexings		N
	Electric strength test, 1000 V between live parts and metal parts		N
23.4	Bare internal wiring sufficiently rigid and fixed	No such bare internal wire	N
23.5	The basic insulation of internal wiring withstanding the electrical stress likely to occur in normal use		N
	No breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		N
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by positive means		N
23.7	Only the colour combination green/yellow used for earthing conductors		N
23.8	Aluminium wires not used for internal wiring		P
23.9	No lead-tin soldering of stranded conductors where they are subject to contact pressure, unless		N
	clamping means so constructed that there is no risk of bad contact due to cold flow of the solder		N
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

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
24	COMPONENTS		-
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components	(see appended table)	P
	Components not tested and found to comply with relevant IEC standard for the number of cycles specified are tested in accordance with 24.1.1 to 24.1.9		N
	Components not tested and found to comply with relevant IEC standard, components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders 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
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14, or		N
	tested according to annex F		N
24.1.2	Safety isolating transformers complying with IEC 61558-2-6, or		N
	tested according to annex G		N
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000, or		N
	tested according to annex H		N
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N
24.1.4	Automatic controls complying with IEC 60730-1 with relevant part 2. The number of cycles of operation being:		-
	- thermostats:		N
	- temperature limiters:		N
	- self-resetting thermal cut-outs:		N
	- voltage maintained non-self-resetting thermal cut-outs:		N
	- other non-self-resetting thermal cut-outs:		N
	- timers:		N
	- energy regulators:		N
	Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	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
24.1.5	Appliance couplers complying with IEC 60320-1		N
	However, appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N
	Interconnection couplers complying with IEC 60320-2-2		N
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N
24.1.8	The relevant standard for thermal links is IEC 60691. Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N
24.1.9	Relays, other than motor starting relays, tested as part of the appliance		N
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of operations in 24.1.4 selected according to the relay function in the appliance:		N
24.2	No switches or automatic controls in flexible cords		N
	No devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		N
	No thermal cut-outs which can be reset by soldering		N
	Massage pads may be fitted with a switch in the flexible cord.		N
	Massage chairs and massage beds may be fitted with a control in the flexible cord, provided that the length of the flexible cord is such that the control cannot make contact with the floor in normal use		N
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and having a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance and used accordingly		N
	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		N
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 42V		N
	In addition, the motors are complying with the requirements of Annex I		N
24.7	Hose-sets for connection of appliances to the water mains, complying with IEC 61770 and supplied with the appliance		N
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		N
	One or more of the following conditions are to be met:		N
	- the capacitors are of class S2 or S3 according to IEC 60252-1		N
	- the capacitors are housed within a metallic or ceramic enclosure		N
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E		N
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		-
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		N
	- supply cord fitted with a plug		N
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance		N
	- pins for insertion into socket-outlets		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
25.2	Appliance not provided with more than one means of connection to the supply mains		N
	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
25.3	Connection of supply conductors for appliance intended to be permanently connected to fixed wiring possible after the appliance has been fixed to its support		N
	Appliance provided with a set of terminals for the connection of cables or fixed wiring, cross-sectional areas specified in 26.6		N
	Appliance provided with a set of terminals allowing the connection of a flexible cord		N
	Appliance provided with a set of supply leads accommodated in a suitable compartment		N
	Appliance provided with a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate type of cable or conduit		N
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10		N
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in 29		N
25.5	Method for assemble supply cord with the appliance:		-
	- type X attachment		N
	- type Y attachment		N
	- type Z attachment, if allowed in part 2		N
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N
25.6	Plugs fitted with only one flexible cord		N
25.7	Supply cords being one of the following types:		-
	- rubber sheathed (at least 60245 IEC 53)		N
	- polychloroprene sheathed (at least 60245 IEC 57)		N
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 87)		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Polyvinyl chloride sheathed: Not used if they are likely to touch metal parts having a temperature rise exceeding 75K during the test of Clause 11.		N
	- light polyvinyl chloride sheathed cord (at least 60227 IEC 52), appliances not exceeding 3 kg		N
	- ordinary polyvinyl chloride sheathed cord (at least 60227 IEC 53), other appliances		N
	Heat resistant polyvinyl chloride sheathed: Not used for type X attachment other than specially prepared cords.		N
	- Heat-resistant light polyvinyl chloride sheathed cord (at least 60227 IEC 56), appliances not exceeding 3 kg		N
	- heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), other appliances		N
	Flat twin tinsel cord is allowed for hand-held massage appliances as long as they are fitted with a non-rewirable plug		N
25.8	Nominal cross-sectional area of supply cords according to table 11; rated current (A); cross-sectional area (mm^2):		N
25.9	Supply cord not in contact with sharp points or edges		N
25.10	Green/yellow core for earthing purposes in Class I appliance		N
25.11	Conductors of supply cords not consolidated by lead-tin soldering where they are subject to contact pressure, unless		N
	clamping means so constructed that there is no risk of bad contacts due to cold flow of the solder		N
25.12	Moulding the cord to part of the enclosure does not damage the insulation of the supply cord		N
25.13	Inlet opening so shaped as to prevent damage to the supply cord		N
	Unless the enclosure at the inlet opening is of insulation material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N
	If unsheathed supply cord, a similar additional bushing or lining is required, unless		N
	the appliance is class 0		N
25.14	Supply cords adequately protected against excessive flexing		N
	Flexing test:		N
	- applied force (N):	10	N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	- number of flexings:	10000	N
	The test does not result in:		N
	- short circuit between the conductors		N
	- breakage of more than 10% of the strands of any conductor		N
	- separation of the conductor from its terminal		N
	- loosening of any cord guard		N
	- damage, within the meaning of the standard, to the cord or the cord guard		N
	- broken strands piercing the insulation and becoming accessible		N
25.15	Conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		N
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		N
	Pull and torque test of supply cord, values shown in table 10: pull (N); torque (not on automatic cord reel) (Nm):		N
	Max. 2 mm displacement of the cord, and conductors not moved more than 1 mm in the terminals		N
	Creepage distances and clearances not reduced below values specified in 29.1		N
25.16	Cord anchorages for type X attachments constructed and located so that:		N
	- replacement of the cord is easily possible		N
	- it is clear how the relief from strain and the prevention of twisting are obtained		N
	- they are suitable for different types of cord		N
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless separated from accessible metal parts by supplementary insulation		N
	- the cord is not clamped by a metal screw which bears directly on the cord		N
	- at least one part of the cord anchorage securely fixed to the appliance, unless part of a specially prepared cord		N
	- screws which have to be operated when replacing the cord do not fix any other component, if applicable		N
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	- for Class 0, 0I and I appliances: they are of insulating material or are provided with an insulating lining, unless a failure of the insulation of the cord does not make accessible metal parts live		N
	- for Class II appliances: they are of insulating material, or if of metal, they are insulated from accessible metal parts by supplementary insulation		N
25.17	Adequate cord anchorages for type Y and Z attachment		N
25.18	Cord anchorages only accessible with the aid of a tool, or		N
	so constructed that the cord can only be fitted with the aid of a tool		N
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N
	Tying the cord into a knot or tying the cord with string not used		N
25.20	Conductors of the supply cord for type Y and Z attachment adequately additionally insulated		N
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed to permit checking of conductors with respect to correct positioning and connection before fitting any cover, no risk of damage to the conductors when fitting the cover, no contact with accessible metal parts if a conductor becomes loose, etc.		N
	For portable appliances, the uninsulated end of a conductor prevented from any contact with accessible metal parts, unless the end of the cord is such that the conductors are unlikely to slip free		N
25.22	Appliance inlet:		-
	- live parts not accessible during insertion or removal		N
	- connector can be inserted without difficulty		N
	- the appliance is not supported by the connector		N
	- is not for cold conditions if temp. rise of external metal parts exceeds 75 K, unless the supply cord is not likely to touch such metal parts		N
25.23	Interconnection cords comply with the requirements for the supply cord, except as specified		N
	If necessary, electric strength test of 16.3		N
25.24	Interconnection cords not detachable without the aid of a tool if compliance with the standard is impaired when they are disconnected		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
25.25	Dimensions of pins compatible with the dimensions of the relevant socket-outlet. Dimensions of pins and engagement face in accordance with the relevant plug in IEC 60083		N
26	TERMINALS FOR EXTERNAL CONDUCTORS		-
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		N
	Terminals only accessible after removal of a non-detachable cover		N
	However, 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
26.2	Appliances with type X attachment and appliances for connection to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless the connections are soldered		N
	Screws and nuts serve only to clamp supply conductors, except		N
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone		N
	Soldering alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free at the soldered joint		N
26.3	Terminals for type X attachment and for connection to fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure and without damaging the conductor		N
	Terminals for type X attachment and those for connection to fixed wiring so fixed that when tightening or loosening the clamping means:		N
	- the terminal does not loosen		N
	- internal wiring is not subjected to stress		N
	- clearances and creepage distances are not reduced below the values in 29		N
	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. Nominal diameter of thread (mm); screw category; torque (Nm):		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
26.4	Terminals for type X attachment, except those with a specially prepared cord, and those for connection to fixed wiring, no special preparation of conductors required, and so constructed or placed that conductors prevented from slipping out		N
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
	Stranded conductor test, 8 mm insulation removed		N
	No contact between live parts and accessible metal parts and, for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N
26.6	Terminals for type X attachment and for connection to fixed wiring suitable for connection of conductors with required cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm^2):		N
	Terminals only suitable for a specially prepared cord		N
26.7	Terminals for type X attachment accessible after removal of a cover or part of the enclosure		N
26.8	Terminals for the connection to fixed wiring, including the earthing terminal, located close to each other		N
26.9	Terminals of the pillar type constructed and located as specified		N
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless conductors ends fitted with a device suitable for screw terminals		N
	Pull test of 5 N to the connection		N
26.11	For type Y and Z attachment: soldered, welded, crimped and similar connections may be used		N
	For Class II appliances: the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N
	For Class II appliances: soldering, welding or crimping alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free		N
27	PROVISION FOR EARTHING		N
27.1	Accessible metal parts of Class 0I and I appliances, permanently and reliably connected to an earthing terminal or contact of the appliance inlet		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Earthing terminals not connected to neutral terminal		N
	Class 0, II and III appliance have no provision for earthing		N
	Safety extra-low voltage circuits not earthed, unless protective extra-low voltage circuits		N
27.2	Clamping means adequately secured against accidental loosening		N
	Terminals used for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm^2 , and		N
	do not provide earthing continuity between different parts of the appliance		N
	Conductors cannot be loosened without the aid of a tool		N
27.3	For detachable parts that are plugged into another part of the appliance, and having an earth connection, the earth connection made before and separated after current-carrying connections when removing the part		N
	For appliances with supply cord, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		N
27.4	No risk of corrosion resulting from contact between metal of earthing terminal and other metal		N
	Adequate resistance to corrosion of coated or uncoated parts providing earthing continuity, other than parts of a metal frame or enclosure		N
	Parts of steel providing earthing continuity provided at the essential areas with an electroplated coating, thickness at least 5 µm		N
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N
	In case of aluminium alloys precautions taken to avoid risk of corrosion		N
27.5	Low resistance of connection between earthing terminal and earthed metal parts		N
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided that clearances of basic insulation are based on the rated voltage of the appliance		N
	Resistance not exceeding 0,1 Ω at the specified low-resistance test		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
27.6	The printed conductors of printed circuit boards shall not be used to provide earthing continuity in hand-held appliances.		N
	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
28	SCREWS AND CONNECTIONS		-
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		N
	Screws not of soft metal liable to creep, such as zinc or aluminium	No such screws	N
	Diameter of screws of insulating material min. 3 mm		N
	Screws of insulating material not used for any electrical connection or connections providing earthing continuity		N
	Screws used for electrical connections or connections providing earthing continuity screw into metal		N
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N
	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 can impair basic insulation		N
	For screws and nuts; test as specified	(see appended table)	N
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure not transmitted through insulating material liable to shrink or distort, unless shrinkage or distortion compensated		N
	This requirement does not apply to electrical connections in circuits carrying a current not exceeding 0.5A		N
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N
	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
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	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:		N
	- in normal use,		N
	- during user maintenance,		N
	- when replacing a supply cord having a type X attachment, or		N
	- during installation		N
	At least two screws being used for each connection providing earthing continuity, unless		N
	the screw forms a thread having a length of at least half the diameter of the screw		N
	Thread-cutting and space-threaded screws may be used in connections providing earthing continuity, provided unnecessary to disturb the connection and at least two screws are used for each connection		N
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		N
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if subjected to torsion		N
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		-
	Clearances, creepage distances and solid insulation withstand electrical stress		N
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies:		N
	The microenvironment is pollution degree 1 under Type 1 coating		N
	No clearance or creepage distance requirements under Type 2 coating		N
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		N
	for basic insulation and functional insulation they comply with the implulse voltage test of clause 14		N
	However, if the construction is 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		N
	Impulse voltage test not applicable:		-

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	- when the microenvironment is pollution degree 3		N
	- for basic insulation of class 0 and class 01 appliances		N
	Appliances are in overvoltage category II		N
	Clearances less than specified in table 16 not allowed for basic insulation of class 0 and class 0I appliances,		N
	or if pollution degree 3 is applicable		N
	Compliance is checked by inspection and measurements as specified		N
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		N
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1mm if the microenvironment is pollution degree 1		N
	Lacquered conductors of windings considered to be bare conductors		N
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16		N
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, but using the next higher step for rated impulse voltage		N
29.1.4	For functional insulation, the values of table 16 are applicable, unless		N
	the appliance complies with clause 19 with the functional insulation short-circuited		N
	Lacquered conductors of windings considered to be bare conductors		N
	However, clearances at crossover points are not measured		N
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N
29.1.5	Appliances having higher working voltage than rated voltage, the voltage used for determining clearances from table 16 is the sum of the rated impulse voltage and the difference between the peak value of the working voltage and the peak value of the rated voltage		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	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
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation based on the working voltage used as the rated voltage in table 15		N
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree		N
	Pollution degree 2 applies, unless		N
	precautions taken to protect the insulation; pollution degree 1		N
	insulation subjected to conductive pollution; pollution degree 3		N
29.2.1	Creepage distances of basic insulation not less than specified in table 17		N
	For pollution degree 1, 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
29.2.2	Creepage distances of supplementary insulation at least as specified for basic insulation in table 17	(see appended table)	N
29.2.3	Creepage distances of reinforced insulation at least double as specified for basic insulation in table 17	(see appended table)	N
29.2.4	Creepage distances of functional insulation not less than specified in table 18	(see appended table)	N
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N
29.3	Supplementary and reinforced insulation having adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		N
	Compliance checked by:		-
	- measurement, in accordance with 29.3.1, or		N
	- an electric strength test in accordance with 29.3.2, or		N
	- an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
29.3.1	Supplementary insulation having a thickness of at least 1 mm		N
	Reinforced insulation having a thickness of at least 2 mm		N
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N
	Supplementary insulation consisting of at least 2 layers		N
	Reinforced insulation consisting of at least 3 layers		N
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N
	the electric strength test of 16.3		N
	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
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19:		N
30	RESISTANCE TO HEAT AND FIRE		-
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	thermoplastic material providing supplementary or reinforced insulation,		N
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts: 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):		P
	Parts supporting live parts: 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):		P
	Parts of thermoplastic material providing supplementary or reinforced insulation, 25°C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C):		N
30.2	Parts of non-metallic material adequately resistant to ignition and spread of fire		P
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Compliance checked by the test of 30.2.1. In addition:		P
	- attended appliances, 30.2.2 applies		P
	- unattended appliances, 30.2.3 applies		N
	Appliances for remote operation, 30.2.3 applies		N
	Base material of printed circuit board, 30.2.4 applies		N
	For other appliances, 30.2.2 applies		N
30.2.1	Glow-wire test of IEC 60695-2-11 at 550 °C, unless		P
	the material is classified at least HB40 according to IEC 60695-11-10		N
	Parts for which the glow-wire test cannot be carried out meet the requirements in ISO9772 for category HBF material		N
30.2.2	Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and parts of non-metallic material within a distance of 3mm of such connections, are subjected to the glow-wire test of IEC 60695-2-11.		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:		-
	-750°C, for connections carrying a current exceeding 0,5A during normal operation		N
	-650°C, for other connections		N
	Test as specified for an interposed shielding material		N
	When the glow-wire test of IEC 60695-2-11 is carried out, the temperatures are:		-
	-750°C, for connections carrying a current exceeding 0,5A during normal operation		P
	-650°C, for other connections		N
	Test not applicable to conditions as specified		N
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		N
	Tests not applicable to conditions as specified		N
30.2.3.1	Parts of insulating material supporting connections carrying a current exceeding 0.2A during normal operation, and		N
	parts of non-metallic material within a distance of 3mm,		N
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850° C		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Glow-wire test not carried out on parts of material classified as having a glow-wire flammability index of at least 850° C according to IEC 60695-2-12		N
	Glow-wire test not carried out on small parts that comply with the needle-flame test of Annex E or on small parts of material classified as V-0 or V-1 according to IEC 60695-11-10		N
	Test as specified for an interposed shielding material		N
30.2.3.2	Parts of non-metallic material supporting current-carrying connections, and		N
	parts of non-metallic material within a distance of 3mm,		N
	subjected to glow-wire test of IEC 60695-2-11		N
	Test not carried out on material having a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N
	-775°C, for connections carrying a current exceeding 0,2A during normal operation		N
	-675°C, for other connections		N
	When the glow-wire test of IEC 60695-2-11 is carried out, the temperatures are:		N
	-750°C, for connections carrying a current exceeding 0,2A during normal operation		N
	-650°C, for other connections		N
	Parts that during the test produce a flame persisting longer than 2 s, tested as specified		N
	If a flame persists longer than 2 s during the test, parts above the connection, as specified, subjected to the needle-flame test of annex E, unless		N
	the material is classified as V-0 or V-1 according to IEC 60695-11-10		N
30.2.4	Base material of printed circuit boards subjected to needle-flame test of annex E		N
	Test not applicable to conditions as specified		N
31	RESISTANCE TO RUSTING		-
	Relevant ferrous parts adequately protected against rusting		N
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		-
	Appliance shall not emit harmful radiation, present a toxic or similar hazard due to their operation in normal use		N
	Relevant tests specified in part 2, if necessary		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		-
	Description of routine tests to be carried out by the manufacturer		N
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES		-
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		P
	This annex does not apply to battery chargers		N
3.1.9	Appliance operated under the following conditions:		-
	-the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		P
	-the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		P
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		P
	If the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		P
5.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N
7.6	Additional symbols		N
7.12	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N
	Details about how to remove batteries containing materials hazardous to the environment given		N
7.15	Markings placed on the part of the appliance connected to the supply mains		P
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment		N
	If the appliance can be operated without batteries, double or reinforced insulation required		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
11.7	The battery is charged for the period described		P
19.1	Appliances subjected to tests of 19.101, 19.102 and 19.103		P
19.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		P
19.102	Short-circuiting of the terminals of the battery, being fully charged, for appliances having batteries that can be removed without the aid of a tool		N
19.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N
21.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength, checked according to procedure 2 of IEC 68-2-32		N
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-32, the number of falls being:		N
	- 100, the mass of part does not exceed 250 g		N
	- 50, the mass of part exceeds 250 g		N
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N
25.13	An additional lining or bushing not required for interconnection cords operating at safety extra-low voltage		N
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N
	For other parts, 30.2.2 applies		N
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		-
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		-
	Applicable to appliances having motors that incorporate thermal motor protectors		N
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		-
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		N
7	Severities		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	The duration of application of the test flame is 30 s ± 1 s		N
9	Test procedure		N
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		N
9.2	The first paragraph does not apply		N
	If possible, the flame is applied at least 10 mm from a corner		N
9.3	The test is carried out on one specimen		N
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N
11	Evaluation of test results		N
	The duration of burning not exceeding 30 s		N
	However, for printed circuit boards, the duration of burning not exceeding 15 s		N
F	ANNEX F (NORMATIVE) CAPACITORS		-
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		N
1.5	Terminology		N
1.5.3	Class X capacitors tested according to subclass X2		N
1.5.4	This subclause is applicable		N
1.6	Marking		N
	Items a) and b) are applicable		N
3.4	Approval testing		N
3.4.3.2	Table II is applicable as described		N
4.1	Visual examination and check of dimensions		N
	This subclause is applicable		N
4.2	Electrical tests		N
4.2.1	This subclause is applicable		N
4.2.5	This subclause is applicable		N
4.2.5.2	Only table IX is applicable		N
	Values for test A apply		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	However, for capacitors in heating appliances the values for test B or C apply		N
4.12	Damp heat, steady state		N
	This subclause is applicable		N
	Only insulation resistance and voltage proof are checked		N
4.13	Impulse voltage		N
	This subclause is applicable		N
4.14	Endurance		N
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 applicable		N
4.14.7	Only insulation resistance and voltage proof are checked		N
	Visual examination, no visible damage		N
4.17	Passive flammability test		N
	This subclause is applicable		N
4.18	Active flammability test		N
	This subclause is applicable		N
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		-
	The following modifications to this standard are applicable for safety isolating transformers:		N
7	Marking and instructions		N
7.1	Transformers for specific use marked with:		N
	-name, trademark or identification mark of the manufacturer or responsible vendor		N
	-model or type reference		N
17	Overload protection of transformers and associated circuits		N
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N
22	Construction		N
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N
29	Clearances, creepage distances and solid insulation		N
29.1, 29.2 and 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N
H	ANNEX H (NORMATIVE) SWITCHES		-

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	Switches comply with the following clauses of IEC 61058-1, as modified:		N
	-The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N
	-Before being tested, switches are operated 20 times without load		N
8	Marking and documentation		N
	Switches are not required to be marked		N
	However, switches that can be tested separately from the appliance marked with the manufacturer’s name or trade mark and the type reference		N
13	Mechanism		N
	The tests may be carried out on a separate sample		N
15	Insulation resistance and dielectric strength		N
15.1	Not applicable		N
15.2	Not applicable		N
15.3	Applicable for full disconnection and micro-disconnection		N
17	Endurance		N
	Compliance is checked on three separate appliances or switches		N
	For 17.2.4.4, the number of cycles is 10 000, unless otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335		N
	Switches for operation under no load and which can be operated only by a tool and switches operated by hand that are interlocked so that they cannot be operated under load, are not subjected to the tests		N
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1		N
	Temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1		N
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		N
	This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		-
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		N
8	Protection against access to live parts		N
8.1	Metal parts of the motor are considered to be bare live parts		N
11	Heating		N
11.3	Temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N
11.8	Temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N
16	Leakage current and electric strength		N
16.3	Insulation between live parts of the motor and its other metal parts not subjected to the test		N
19	Abnormal operation		N
19.1	The tests of 19.7 to 19.9 not carried out		N
19.101	Appliance operated at rated voltage with each of the following fault conditions:		N
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N
	- short circuit of each diode of the rectifier		N
	- open circuit of the supply to the motor		N
	- open circuit of any parallel resistor, the motor being in operation		N
	Only one fault simulated at a time, the tests carried out consecutively		N
22	Construction		N
22.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N
	Compliance checked by the tests specified for double and reinforced insulation		N
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		-
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
5.7	Conditioning of the test specimens		N
	When production samples are used, three samples of the printed circuit board are tested		N
5.7.1	Cold		N
	The test is carried out at -25°C		N
5.7.3	Rapid change of temperature		N
	Severity 1 is specified		N
5.9	Additional tests		N
	This subclause is not applicable		N
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		-
	The information on overvoltage categories is extracted from IEC 60664-1		N
	Overvoltage category is a numeral defining a transient overvoltage condition		N
	Equipment of overvoltage category IV is for use at the origin of the installation		N
	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
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		N
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N
	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
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		-
	Sequences for the determination of clearances and creepage distances		N
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		-
	The information on pollution degrees is extracted from IEC 60664-1		N
	Pollution		-

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
	The microenvironment determines the effect of pollution on the insulation, taking into account the microenvironment		N
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		N
	Minimum clearances specified where pollution may be present in the microenvironment		N
	Degrees of pollution in the microenvironment		-
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		N
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		N
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		-
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		N
7	Test apparatus		-
7.3	Test solutions		-
	Test solution A is used		N
10	Determination of proof tracking index (PTI)		N
10.1	Procedure		-
	The proof voltage is 100V, 175V, 400V or 600V:		N
	The last paragraph of Clause 3 applies		N
	The test is carried out on five specimens		N
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N
10.2	Report		-
	The report stating if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		-
	Description of tests for determination of resistance to heat and fire		N
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		-
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked		N
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked , if liable to be connected to a supply mains that excludes the protective earthing conductor		N
5	General conditions for the tests		N
5.7	The ambient temperature for the tests of Clauses 11 and 13 is 40 +3/0		N
7	Marking and instructions		N
7.1	The appliance marked with the letters		N
7.12	The instructions state that the appliance is to be supplied through a RCD having a rated residual operating current not exceeding 30 mA		N
	The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries		N
11	Heating		-
11.8	The values of Table 3 are reduced by 15 K		N
13	Leakage current and electric strength at operating temperature		N
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N
15	Moisture resistance		-
15.3	The value of t is 37 °C		N
16	Leakage current and electric strength		N
16.2	The leakage current for class I appliances not exceeding 0,5 mA		N
19	Abnormal operation		N
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		N
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		-
	Description of tests for appliances incorporating electronic circuits		N

EN 60335-1 & EN 60335-2-32			
Clause	Requirement Test	Result - Remark	Verdict
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		-
	Software evaluated in accordance with the following clauses of Annex H of IEC 60730-1, as modified		-
H.2	Definitions		-
	Only definitions H.2.16 to H.2.20 applicable		N
H.7	Information		-
	Only footnotes 12) to 18) of Table 7.2, as modified, applicable		N
H.11.12	Controls using software		-
H.11.12.7	Delete text		N
H.11.12.7.1	For appliances using software class C having a single channel with self-test and monitoring structure, the manufacturer provides the measures necessary to address the fault/errors in safety related segments and data		N
H.11.12.8	Software fault/error detection occurs before compliance with 19.13 of IEC 60335-1 is impaired		N
H.11.12.8.1	Replace text		N
H.11.12.13	Software and safety related hardware under its control initializes and terminates before compliance with 19.13 of IEC 60335-1 is impaired		N
ZA	ANNEX ZA(NORMATIVE) SPECIAL NATIONAL CONDITION		N
	National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard or Harmonization Document.		N
ZB	ANNEX ZB(INFORMATIVE) A-DEVIATION		N
	National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/CENELEC member.		N
ZC	ANNEX ZC(NORMATIVE) NORMATIVE REFERENCE TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		P
	IEC standards and EN standards used		P
ZD	ANNEX Z(INFORMATIVE) IEC AND CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		P
	IEC and CENELEC code designations for flexible cords		P

EN 62233			
Clause	Requirement + Test	Result - Remark	Verdict
EMF- ELECTROMAGNETICS FIELDS			
	The tested product also complies with the requirements of EN 62233:2008		P
	Limit ……100%	Measured max. 6.6%	P

10.1	TABLE: Power input deviation				N/A
Input deviation of/at:	P rated (W)	P measured (W)	dP	Required dP	Remark
--	--	--	--	--	--
--	--	--	--	--	--

10.2	TABLE : Current deviation				P
Current deviation of/at:	I rated (A)	I measured (A)	dI	Required dI	Remark
DC5V	1	0.986	-1.4%	+15%	P

11.8	TABLE: Heating test, thermocouples			P
	Test voltage (V).....	5.3V	Full battery	—
	Ambient (°C).....	23.8	24.0	—
Thermocouple locations		dT (K)		Max. dT (K)
Internal wire		2.3	6.8	70
PCB near U1		6.0	8.3	105
Motor		0.5	16.7	95
Battery surface		4.7	11.7	20
Accessible surface		0.8	2.5	60
Supplementary information:				

13.2	TABLE: Leakage current			N
	Heating appliances: 1.15 x rated input:			—
	Motor-operated and combined appliances: 1.06 x rated voltage:			—
Leakage current between			I (mA)	Max. allowed I (mA)
Note: Test witch adapter				

13.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
DC input port to accessible part		500	No
Note: Test witch adapter			

14	TABLE: Transient overvoltages					N
Clearance between:		Cl (mm)	Required Cl (mm)	Rated impulse voltage (V)	Impulse test voltage (V)	Flashover (Yes/No)

Supplementary information:					

16.2	TABLE: Leakage current		N
	Single phase appliances: 1.06 x rated voltage:		—
	Three phase appliances 1.06 x rated voltage divided by √3::		—
Leakage current between		I (mA)	Max. allowed I (mA)
Note: Test witch adapter			

16.3	TABLE: Electric strength	P
Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
DC input port to accessible part	500	No
Note: Test witch adapter		

17	**TABLE: Overload protection, thermocouple measurements**	N/A
Temperature rise of part/at:	dT (K)	Max. dT (K)
Supplementary information:		

17	**TABLE: Overload protection, resistance method**				N/A
	Test voltage (V).....:				—
	Ambient, t1 (°C)..... :				—
	Ambient, t2 (°C)..... :				—
Temperature of winding	R1 (Ω)	R2 (Ω)	dT (K)	T (°C)	Max. T (°C)
Supplementary information:					

19	Abnormal operation conditions	P

Operational characteristics	YES/NO	Operational conditions
Are there electronic circuits to control the appliance operation?	NO	--
Are there “off” or “stand-by” position?	NO	--
The unintended operation of the appliance results in dangerous malfunction?	NO	--

Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result
19.2	N/A	N/A	N/A	N.A	N.A	N.A	N/A
19.3	N/A	N/A	N/A	N.A	N.A	N.A	N/A
19.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.7	Lock motor	No hazard.	N/A	N/A	N/A	N/A	P
19.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.11.2	--	The EUT normal operation,no damage	N/A	N/A	N/A	N/A	P
19.11.4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.10X	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Supplementary information:							

19.7	TABLE: Abnormal operation, locked rotor/moving parts		P
	Test voltage (V) ..... :	Full battery	–
	Ambient, t1 (°C)..... :	24.2	–
	Ambient, t2 (°C)..... :	24.0	–

Temperature of winding:	R1 (Ω)	R2 (Ω)	Δ T (K)	T (C)	Max. T (° C)
Motor	--	--	22.4	44.4	225-25

Supplementary information:

19.9	TABLE: Abnormal operation, running overload		N/A
	Test voltage (V)..... :		—
	Ambient, t1 (°C)..... :		—
	Ambient, t2 (°C)..... :		—

Temperature of winding	R1 (Ω)	R2 (Ω)	dT (K)	T (°C)	Max. T (°C)
Supplementary information:					

19.11.2	Fault Conditions Test for Electronic Circuits		P
	Test voltage (V):	5V	—
	Ambient (°C) :	24.3	—

No.	Component no.	Fault	Test voltage (V)	Test time	Fuse no.	Fuse current (A)	Result
1	D1	S-C	5V	10min	-	-	Unit shutdown, no hazards.
2	R1	S-C	5V	10min	-	-	Unit shutdown, no hazards.
3	C2	S-C	5V	10min	-	-	Unit shutdown, no hazards.
4	Battery	Over charger	5V	168h	-	-	No high temperature, no hazards.

19.13	TABLE: Abnormal operation, temperature rises	N/A

Thermocouple locations	Max. temperature rise measured, dT (K)	Max.temperature rise limit, dT (K)
Supplementary information:		

21.1	TABLE: Impact resistance	N

Impacts per surface	Surface tested	Impact energy (Nm)	Comments
Supplementary information:			

24.1	TABLE: Components				P
object part No.	manufacturer/trade mark	type/model	technical data	standard	mark(s) of conformity

PCB	Dong Yang Bida Enterprise Electronics Co Ltd	A01	V-0, 130 °C	UL796	UL E304228
Connector	LG Chem (Guangzhou) Engineering Plastics Co Ltd	LUPOY EF-1006F(m)	V-0, 120°C, min. 1.6 mm thickness	UL 94	UL E248280
Plastic enclosure	CHI MEI CORPORATION	PC-6410, PB-1203	V-0, 80°C, Min. 1.0mm	UL94, UL746C	UL E56070
Battery	GeChuanecTiarZi	18650-2S	7.4V, 1800mAh, 13.32Wh	EN 62133-2	Test report
Internal wire	Wenzhou Yuanyang Cable Co., Ltd	1007	VW-1 22AWG 80°300V	UL 758	UL E349477
Motor	WeiWo	51S-145	DC5V	EN 60335-2-32	Test witch appliance
Supplementary information: [1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

28.1	**TABLE: Threaded part torque test**		N
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Supplementary information:			

29.1	TABLE: Clearances					N
	Overvoltage category					—
		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic	Functional	Supplementary	Reinforced	Verdict / Remark
330	0,5*					N
500	0,5*					N
800	0,5*					N
1 500	0,5*/**					N
2 500	1,5**					N
4 000	3,0**					N
6 000	5,5**					N
8 000	8,0**					N
10 000	11,0**					N
*) The value is increased to 0.8mm for pollution degree 3 *) If the construction is affected by wear, distortion, movement of the parts or during assembly, the value is increased by 0.5 mm						

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation											N
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
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—		N
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		—	—	N
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0		—	—	N
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	—		—	N
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0	—	—		N
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N

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
Between L and N: Cl: 5.6mm, Cr:5.6mm
Live part and accessible enclosure: Cl: 10mm, Cr: 10mm

30.1	TABLE: Ball pressure		P
Part	Test temperature (° C)	Impression diameter (mm)	Allowed impression diameter (mm)
PCB	125	0.7	2
Connector	125	1.2	2
Plastic	75	0.8	2
Supplementary information:			

30.2/30.4	TABLE: Needle- flame test (NFT)				N
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
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					

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		
PCB	See list	-	-	-	0	0	-	P
Plastic	See list	No fire	-	-	-	-	-	P
Connector	See list	-	-	-	0	0	-	P
Object/ Part No./ Material	Manufacturer/ trademark	Glow-wire flammability index (GWFI), °C				GW ignition temp. (GWIT), °C		Verdict
		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)..... :								--
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.								

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
Household and similar electrical appliances – Safety –
Part 1: GENERAL REQUIREMENTS

Differences according to:	EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019 +A2:2019+A15:2021 EN 62233:2008
Attachment Form No.:	EU_GD_IEC60335_1R
Attachment Originator:	Nemko AS
Master Attachment:	2012-03

	CENELEC COMMON MODIFICATIONS		
6.1	Delete “class 0” and “class 01”		P
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		N
	Multi-phase appliances to be connected to the supply mains: 400 V covered	Single-phase appliances	N
7.10	Devices used to start/stop operational functions of the appliance distinguished from other manual devices by means of shape, size, surface texture, position, etc.		P
	An indication that the device has been operated is given by:		P
	• a tactile feedback, or		N
	• an audible and visual feedback		P
7.12	The instructions include the substance of the following:		P
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
7.12.Z1	The specific instructions related to the safe operation of this appliance is collated together in the front section of the user instructions		P
	The height of the characters, measured on the capital letters, is at least 3 mm		P
	These instructions are also available in an alternative format, e.g. on a website		P
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test		P
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		N
8.2	Compliance is checked by applying the test probes of EN 61032		P
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N
11.8	Footnotes to “External enclosure of motor-operated appliances” to be taken into account		N
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling		N
20.2	When using the test probe similar to test probe B with a circular stop face, the accessories and detachable covers are removed		N
	Test probe 18 applied with a force of 2,5N on the appliance fully assembled		N
24.1	Components comply with the safety requirements specified in the relevant standards as far as they reasonably apply		P
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance.		P
	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 or do not comply with the standard for the relevant component are tested according to the requirements of 30.2		N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the standard for the relevant component need not be retested provided that:		N
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		N
	- the test report for the component states whether it complied with the standard for the relevant component with or without flame, flames not exceeding 2 s during the test are ignored		N
	Unless components have been previously tested and found to comply with the relevant standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		N
	Components that have not been separately tested and found to comply with the relevant standard, and		N
	components that are not marked or not used in accordance with their marking,		N
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		N
	Lamp holders and starter holders that have not been previously tested and found to comply with the relevant standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant standard under the conditions occurring in the appliance		N
	Where the relevant standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		N
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		N
	with connectors and appliance inlets complying with the standard sheets of IEC 60320-1,		N
	if direct supply to these parts from the supply mains gives rise to a hazard		N
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003	No remote operation	N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Compliance with Clause 8 of this standard is not impaired by connecting the appliance to a device covered by EN 41003		N
24.Z1	For motor running capacitors (IEC 60252-1 type P2) with a metallic enclosure having an overpressure fuse the flame testing of internal plastic parts supporting current carrying connections as required in 30.2.2 and 30.2.3.1 is not necessary		N
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC/TR 60083:		N
	- for Class I appliances: standard sheet C2b, C3b or C4..... :		N
	- for Class II appliances: standard sheet C5 or C6..... :		N
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors or when they are liable to be exposed to significant amount of ultraviolet radiation		N
	Halogen-free thermoplastic compound sheathed supply cords have properties at least those of:		N
	• halogen-free thermoplastic compound sheathed cords (H03Z1Z1H2-F or H03Z1Z1-F), for appliances having a mass not exceeding 3 kg		N
	• halogen-free thermoplastic compound sheathed cords (H05Z1Z1H2-F or H05Z1Z1-F), for other appliances		N
	Cross-linked halogen-free compound sheathed supply cords have properties at least those of cross-linked halogen-free compound sheathed cords (H07ZZ-F)		N
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position unless they are held in place near the terminals independently of the solder		N
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N
32	Compliance regarding electromagnetic fields is checked according to EN 50366 or EN 62233		P
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		P
	The duration of the test is as specified in 19.7		P

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
ZA	**ANNEX ZA** (NORMATIVE) **SPECIAL NATIONAL CONDITIONS**		N
	Norway		N
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N
	Norway		N
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N
	All CENELEC countries		N
25.6 and 25.25	Information concerning National plug and socket-outlets is available from the CENELEC website. Normative national requirements concerning plug and socket-outlets are shown in the relevant National standard		N
	Ireland and United Kingdom		N
25.8	In the table, the lines for 10 A and 16 A are replaced by:		N
	> 10 and ≤ 13 1,25		N
	> 13 and ≤ 16 1,5		N
ZB	**ANNEX ZB** (INFORMATIVE) **A-DEVIATIONS**		N
	Ireland		N
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N
	United Kingdom		N
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N
ZC	**ANNEX ZC** (NORMATIVE) **NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**		N
	A list of referenced documents in this standard		N
ZD	**ANNEX ZD** (INFORMATIVE) **IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS**		N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	A table with IEC and CENELEC code designations for flexible cords		N
ZE	**ANNEX ZE** (INFORMATIVE) **SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE**		N
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative..... :		N
	Model or type reference.....:		N
	Serial number, if any..... :		N
	Production year		N
	Designation of the appliance..... :		N
7.12	Instructions provided with the appliance so that the appliance can be used safely		N
	The instructions contain at least the following information:		N
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		N
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		N
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		N
	- the general description of the appliance, when needed due to the complexity of the appliance		N
	- specific precautions if required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving		N
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		N
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		N
	The words “Original instructions” appear on the language version(s) verified by the manufacturer or by the authorized representative		N
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence “Translation of the original instructions” appear in the relevant instructions delivered with the appliance		N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand		N
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures		N
7.12.ZE1	If needed for specific appliances, the following information to be given:		N
	• on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts		N
	• on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N
	• on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided		N
	• on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance		N
	• on the specifications on the spare parts to be used, when these affect the health and safety of the operator		N
	• on airborne noise emissions, determined and declared in accordance with the relevant Part 2, which includes:		N
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A)..... ;		N
	- where this level does not exceed 70 dB(A), this fact is indicated		N
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 μPa)..... :		N
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A)..... :		N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
7.12.ZE2	The instructions includes a warning to disconnect the appliance from its power source during service and when replacing parts		N
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug has to be such that an operator can check from any of the points to which he has access that the plug remains removed		N
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N
	a manual operation is required to restart it		N
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		N
20.2	Dangerous moving transmission parts safeguarded either by design or guards		N
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		N
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		N
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N
	Interlocking movable guards used where frequent access is required		N
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N
	The distance between the seat and the control devices capable of being adapted to the operator		N
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or		N
	so designed that they can be fitted with such attachments, or		N
	be shaped in such a way that standard lifting gear can easily be used		N
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely		N
22.ZE.5	The fixing systems of fixed guards which prevent access to dangerous moving transmission parts only removable with the use of tools		N
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N
	Where possible, guards are incapable of remaining in place without their fixings		N
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N
	Movable guards are interlocked		N
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		N
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N
	Interlocking movable guards remain attached to the appliance when open, and		N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions		N
	The guard is opened to the extent needed to cause the interlocking to operate and is then closed, the number of operations being defined in the specific Part 2..... :		N
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N
	After these tests the interlock system is fit for further use		N
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		N
	- adjustable manually or automatically, depending on the type of work involved, and		N
	- readily adjustable without the use of tools		N
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		N
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N
	Such isolators are clearly identified, and		N
	they are capable of being locked if reconnection endanger persons		N
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N
ZF	**ANNEX ZF** (INFORMATIVE) **CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD**		N
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive)..... :		N
ZG	**ANNEX ZG** (NORMATIVE) **UV APPLIANCES**		N

IEC 60335_1R - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	The following modifications to this standard apply to appliances having UV emitters		N
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109		N
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source		N
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant		N
ZZ	**ANNEX ZZ** (INFORMATIVE) **COVERAGE OF ESSENTIAL REQUIREMENTS OF EC DIRECTIVES**		N
	Description of the relation between this European standard and the LVD (Low Voltage Directive, 2006/95/EC) and the MD (Machinery Directive, 2006/42/EC)		N

IEC60335_2_32E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60335-2-32 **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** (Household and similar electrical appliances – Safety –Part 2: Particular requirements for massage appliance)			
Differences according to.....:	EN IEC 60335-2-32:2021 used in conjunction with EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019 +A2:2019+A15:2021 and EN 62233 :2008		
Attachment Form No..... : **Attachment Originator**.....: **Master Attachment**.....:	EU_GD_IEC60335_2_32E LCIE Date 2010-05		

	CENELEC COMMON MODIFICATIONS (EN)		--
6.1	Delete “class 0” and “class 01”		P
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standards for the telecommunication interface circuitry in the appliance are EN 41003 and EN 60950-1:2006, Subclause 6.3		N
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC 60083:1975:		P
	- for Class I appliances: standard sheet C2b, C3b or C4 ..... :		P
	- for Class II appliances: standard sheet C5 or C6. :		N
25.7	Additional type of supply cord:		--
	- ordinary polychloroprene sheathed flexible cord (60245 IEC 57)		N
25.7	Supply cords having high flexibility, not lighter than:		N
	- rubber insulated and sheathed cord (60245 IEC 86)		N
	- rubber insulated, crosslinked PVC sheathed cord (60245 IEC 87)		N
	- crosslinked PVC insulated and sheathed cord (60245 IEC 88)		N

29.3	The third dashed item replaced by: - an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and, for accessible reinforced insulation consisting of a single layer, measurement in accordance with 29.3.Z1		N
29.3.Z1	For accessible reinforced insulation consisting of a single layer, the thickness of the layer complies with table Z1; rated voltage (V); overvoltage category; thickness (mm)..... :		N
Annex ZA	**ANNEX ZA (NORMATIVE)** **SPECIAL NATIONAL CONDITIONS**		--
	Austria		
25.6	Plugs according to standard sheet C3b not allowed		N
	Belgium		
25.6	Plugs according to standard sheet C2b not allowed		N
	Denmark		
7.12	Requirements regarding marking tag of power supply cord and connection of earthing wire for class I appliances delivered without a plug		N
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 13 A provided with a plug according to the following:		N
	Class I appliances: Section 107-2-D1, ed.3 1998, Standard Sheet DK 2-1a		N
	For appliances covered by a Part 2 of EN 60335, also plugs in accordance with Section 107-2-D1, ed. 3, 1998, Standard Sheet C2b, C3b or C4 are allowed		N
	Class II appliances: Section 107-2-D1, ed.3 1998, Standard Sheet C1b, C5, C6, DKA 2-1a and DKA 2-1b		N
	Stationary single-phase appliances, having a rated current not exceeding 13 A, and provided with a supply cord and a plug, the plug is in accordance with the requirements above		N
	Multi-phase appliances and single-phase appliances having a rated current exceeding 13 A, and provided with a supply cord and a plug, the plug is in accordance with the requirements below:		N
	Class I appliances: Section 107-2-D1, Standard Sheet DK 6-1a / EN 60309-2, Standard Sheet 2-II, 2-IV		N
	Class II appliances: Section 107-2-D1, Standard Sheet DK 6-1a / EN 60309-2, Standard Sheet 2-II, 2-IV, the earthing contact not being connected		N
	The current for the plug not exceeding the values specified; standard sheet (no.); current (A) .....:		N
	Finland		

25.6	Plugs according to standard sheet C3b not allowed		N
France			
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N
25.6	Plugs according to standard sheet C2b not allowed		N
Germany			
25.6	Plugs according to standard sheet C3b not allowed		N
29.3	Third dashed item not applicable for appliances where the insulation is accessible. Additional measures, such as a multi-layered insulation or adequate thickness, taken.		N
Iceland			
25.6	Plugs according to standard sheet C3b not allowed		N
Ireland			
25.6	Plugs according to standard sheet C3b not allowed		N
25.6	Only plugs according to Standard Sheets B2 and C5 allowed		N
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances.		N
25.8	Replacement of figures (rated current/cross-sectional area) in the table		N
Italy			
7.1	The voltage is 220 V/380 V		N
25.6	Plugs according to standard sheet C3b not allowed		N
25.6	Only plugs listed in CENELEC Report R0BT-005:2001 allowed		N
Luxembourg			
25.6	Plugs according to standard sheet C3b not allowed		N
Netherlands			
25.6	Plugs according to standard sheet C3b not allowed		N
Norway			
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N
25.6	Plugs according to standard sheet C3b not allowed		N
Portugal			
25.6	Plugs according to standard sheet C3b not allowed		N
Spain			

25.6	Plugs according to standard sheet C2b not allowed		N
25.6	Plugs according to standard sheet C3b not allowed		N
25.6	For appliances for household use, only the following plugs are allowed:		N
	according to UNE 20315: ESC 10-1b, C2b, C4, C6 or ESB 25-5b		N
	according to UNE-EN 50075		N
Sweden			
25.6	Plugs according to standard sheet C3b not allowed		N
Switzerland			
4	Information about batteries with carbon-zinc and alkali-manganese		N
25.6	Plugs according to standard sheet C3b not allowed		N
25.6	Supply cords of portable household and similar electrical appliances having a rated current not exceeding 10 A, provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:		N
	SEV 6532-2.1991, plug type 15, 3P+N+PE, 250/400 V, 10 A		N
	SEV 6533-2.1991, plug type 11, L+N, 250 V, 10 A		N
	SEV 6534-2.1991 plug type 12, L+N+PE, 250 V, 10 A		N
United Kingdom			
25.6	Plugs according to standard sheet C2b not allowed		N
25.6	Plugs according to standard sheet C3b not allowed		N
25.6	Only plugs according to Standard Sheets B2 and C5 allowed		N
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and standard sheet C5 to be fitted to shavers and toothbrushes.		N
25.8	Replacement of figures (rated current/cross-sectional area) in the table		N
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		--
SWITZERLAND			
4	Information about batteries		N
ITALY			
7.1	The voltage is 220/380 V		N
SPAIN			
7.1	the voltages are 127 V/220 V and 220 V/380 V		N
IRELAND / UNITED KINGDOM			

25.6	: regulations concerning plugs to be fitted to domestic appliances		N
GERMANY			
29.3	29.3 not apply to appliances when insulation is accessible		N

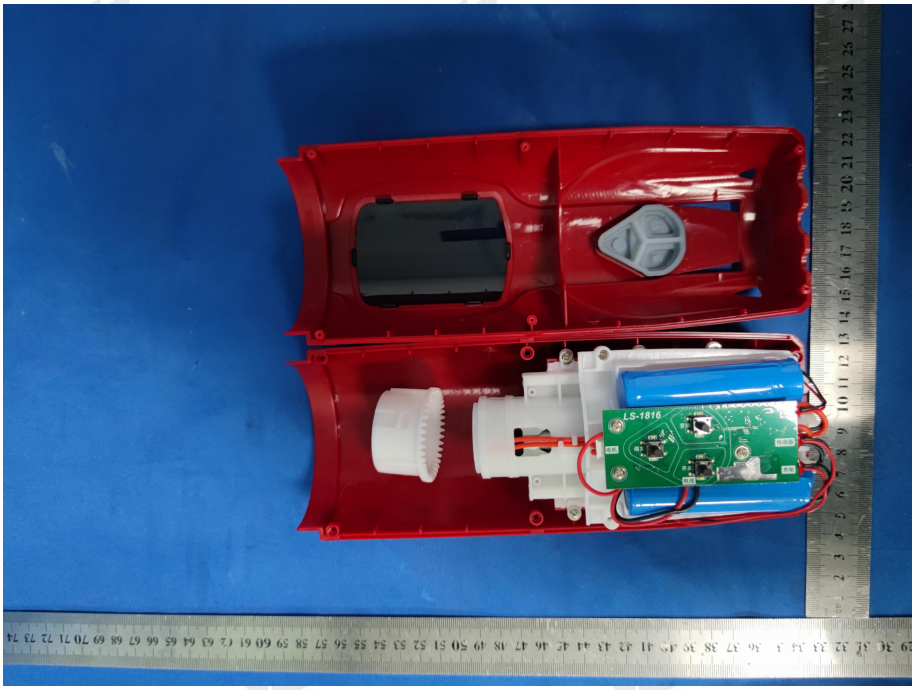
ANNEX II:

Photo-documentation

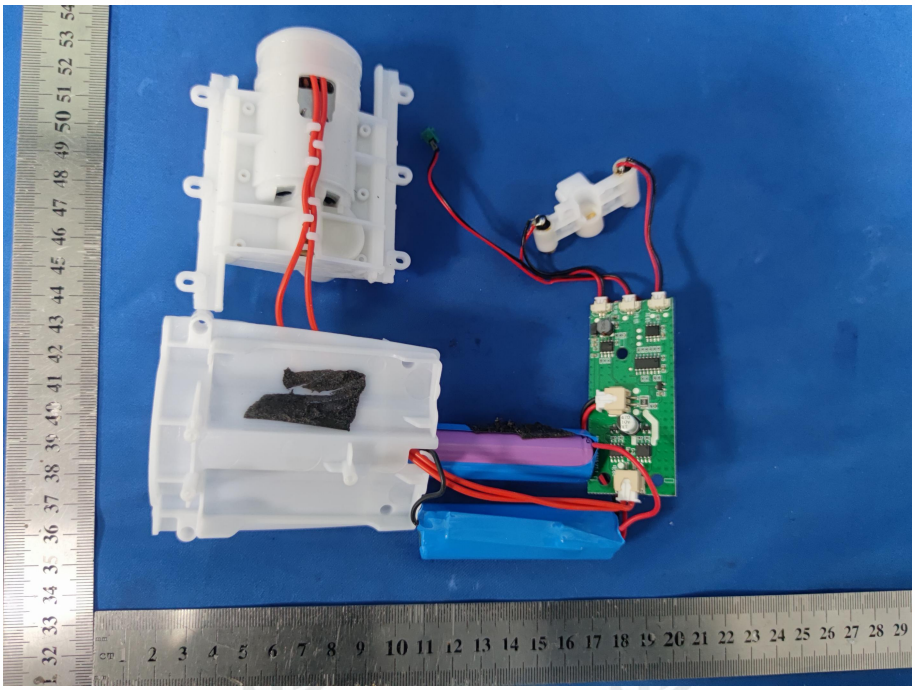
EUT Photo 1

EUT Photo 2

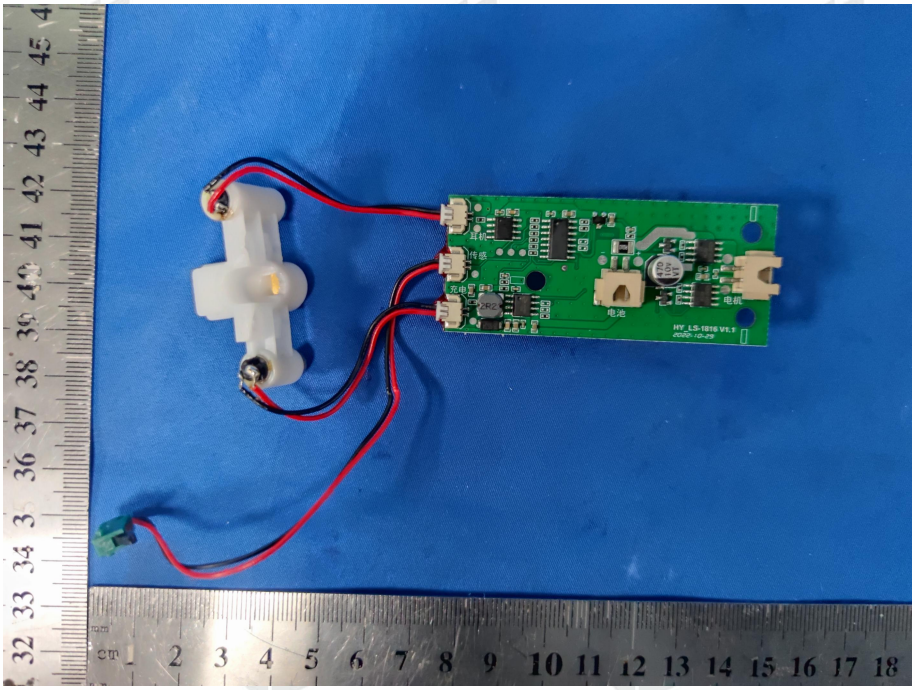
EUT Photo 3



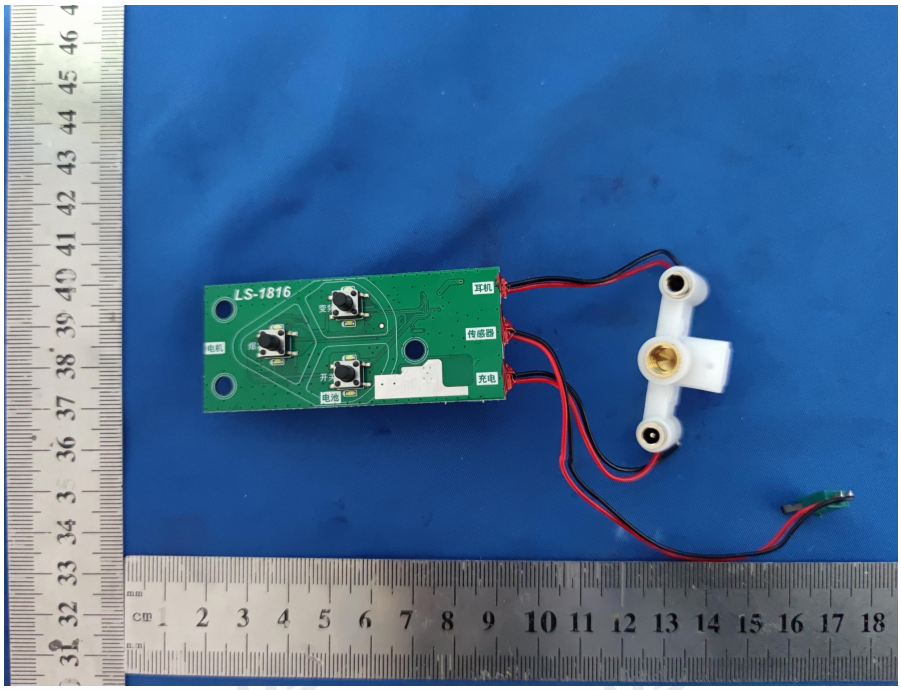
EUT Photo 4



EUT Photo 5



EUT Photo 6



※※※※※ END OF REPORT ※※※※※