Test Report issued under the responsibility of:

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TEST REPORT
IEC 60335-2-23
Part 1: Safety of household and similar electrical appliances
Part 2: Particular requirements for appliances for skin or hair care

Report Number. .....:	231227047GZU-001
Date of issue .....:	March 18, 2024
Total number of pages.....:	134 pages
Name of Testing Laboratory preparing the Report.....:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Applicant's name.....:	Shenzhen Shuye Technology Co., Ltd
Address .....:	Room1301, Building T7, Qianwan 1st Road NO.399, Qianhai Kerry Business Center, Nanshan, Shenzhen, Guangdong, China
Test specification:	
Standard .....:	IEC 60335-2-23:2016, AMD1:2019 in conjunction with IEC 60335-1:2010, COR1:2010, AMD1:2013, COR1:2014, AMD2:2016, COR1:2016
Test procedure .....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60335_2_23L
Test Report Form(s) Originator ....:	VDE Prüf- und Zertifizierungsinstitut GmbH
Master TRF.....:	Dated 2020-07-03

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

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

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description .....:	Hair Dryer
Trade Mark .....:	laifen
Original Product/Equipment Manufacturer.....:	Same as the applicant
Branding Manufacturer(s) .....:	--
Model/Type reference .....:	Mini, Mini Lite
Ratings .....:	220-240V, 50-60Hz, 1100W, Class II for Mini 220-240V, 50-60Hz, 1000W, Class II for Mini Lite

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**CB Testing Laboratory:**	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch	
Testing location/ address ..... :		Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China	
Tested by (name, function, signature) ..... :		Link Liu / Engineer	Link Liu
Approved by (name, function, signature) .. :		Red Fan / Technical Manager	Red Fan
☐	**Testing procedure: CTF Stage 1:**	N/A	
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 2:**	N/A	
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 3:**	N/A	
☐	**Testing procedure: CTF Stage 4:**	N/A	
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
Supervised by (name, function, signature) :			

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

1.Including 14 pages of Photo document (Page 105 to page 118).

2.Including 3 pages of Circuit diagram (Page 119 to page 121).

3.Including 1 page of IEC 60335-2-65:2002+A1:2008+A2:2015 (applicable parts: clause 32) (Page 122).

4.Including 9 pages of Australia and New Zealand National Differences (Page 123 to page 131).

5.Including 3 pages of Korea National Differences (Page 132 to page 134).

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Full tests were performed on model Mini. IEC 60335-2-65:2002+A1:2008+A2:2015 (applicable parts: clause 32) was performed on model Mini. Cl.7, Cl.10 were performed on other models.	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

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

Korea, Australia and New Zealand national difference have been checked.

The following national differences were under consideration, but have no the national differences on CB BULLETIN:

United Arab Emirates, Malaysia

☒ **The product fulfils the requirements of**

IEC 60335-1:2010+A1:2013+A2:2016

IEC 60335-2-23:2016+A1:2019

AS/NZS 60335.1: 2020 + A1: 2021

AS/NZS 60335.2.23: 2017 + A1:2020 + A2: 2021.

Statement concerning the uncertainty of the measurement systems used for the tests

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

☒ **Statement not required by the standard used for type testing.**

Copy of marking plate:

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

For applying for CB:

Hair Dryer
Mini
220-240V 50-60Hz 1100W
Shenzhen Shuye Technology Co.,Ltd.
Made in China


Hair Dryer
Mini Lite
220-240V 50-60Hz 1000W
Shenzhen Shuye Technology Co.,Ltd.
Made in China


For applying for SAA:

Hair Dryer
Mini
220-240V 50-60Hz 1100W
Shenzhen Shuye Technology Co.,Ltd.
Made in China



Hair Dryer
Mini Lite
220-240V 50-60Hz 1000W
Shenzhen Shuye Technology Co.,Ltd.
Made in China



Remark:

The diameter of the symbol  is at least 10 mm and red color.

The marking plate may be only with the sentence of “Warning: Do not use this appliance near water.” or symbol  as an optional.

The symbol  was attached to the supply cord near plug or label

Test item particulars..... :	
Classification of installation and use..... :	Hand-held appliance for professional and indoor use
Supply Connection ..... :	Non-detachable supply cord fitted with a plug
..... :	
Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing.....:	
Date of receipt of test item.....:	November 27, 2023
Date (s) of performance of tests .....:	November 27, 2023 to February 4, 2024

General remarks:

The test results presented in this report relate only to the object tested.
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The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.

Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

"(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.

Name and address of factory (ies) .....:	Dongguan Laifen Electronic Technology Co., Ltd Room 201, Building 3, No.2 Xinghui Road, Songshanhu Tech Park, Dongguan, Guangdong, China

General product information and other remarks:

Hand-held appliance for professional and indoor use

Model Mini Lite was identical with model Mini except the button, air inlet appearance colour and rated power input.

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

5	**GENERAL CONDITIONS FOR THE TESTS**		--
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.		P
5.2	The additional test of 25.14 for hand-held appliances is carried out on a separate appliance. (IEC 60335-2-23:2016)		P
6	**CLASSIFICATION**		--
6.1	Protection against electric shock (IEC 60335-2-23:2016):		--
6.1	- Hairdryers, curling irons, curling combs, facial saunas and other steam-producing or spray producing appliances be class II or III (IEC 60335-2-23:2016) .....:	Class II	P
	However, fixed hairdryers intended to be permanently connected to fixed wiring, helmet-type hairdryers for hairdressers and steam-producing or spray-producing appliances for hairdressers be class I (IEC 60335-2-23:2016).....:		N/A
	- water filled foot care appliances shall be class II or class III; (IEC 60335-2-23:2016/AMD1:2019)		N/A
	- Other appliances be class I, II or III (IEC 60335-2-23:2016) .....:		N/A
6.2	Protection against harmful ingress of water		N/A
	Hand dryers be at least IPX1 (IEC 60335-2-23:2016)		N/A
	Curling rollers of permanent-wave appliances be at least IPX4 (IEC 60335-2-23:2016)		N/A
7	**MARKING AND INSTRUCTIONS**		--
7.1	Rated voltage or voltage range (V) ..... :	See page 2	P
	Symbol for nature of supply, or ..... :	~	P
	Rated frequency (Hz) ..... :	See page 2	P
	Rated power input (W), or ..... :	See page 2	P
	Rated current (A) ..... :		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark..... :	See page 2	P
	Model or type reference ..... :	See page 2	P
	Symbol IEC 60417-5172, for class II appliances		P
	IP number, other than IPX0..... :		N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only, or		N/A
	for appliances powered by rechargeable batteries recharged in the appliance		N/A

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		N/A
	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, if the working voltage exceeds extra-low voltage		N/A
	Portable hairdryers, curling irons and similar appliances shall be marked with symbol ISO 7010-P026 (2011-05) or with the substance of the following: (IEC 60335-2-23:2016)		--
	WARNING: Do not use this appliance near water. (IEC 60335-2-23:2016)		P
	[Symbol ISO 7010-P026 (2011-05)] Do not use this device in a bathtub, shower, or water-filled reservoir (IEC 60335-2-23:2016)		P
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		P
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages or rated frequencies, the voltage or the frequency setting is clearly discernible		N/A
	Requirement met if frequent changes are not required and the rated voltage or rated frequency to which the appliance is to be adjusted is determined from a wiring diagram		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A
	the power input or current are related to the arithmetic mean value of the rated voltage range		P
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		P
	Symbol for class II appliances placed unlikely to be confused with other marking		P
	Units of physical quantities and their symbols according to international standardized system		P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N/A
	correct mode of connection is obvious		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		--
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		N/A
	- marking of functional earthing terminals (symbol IEC 60417-5018)		N/A
	- marking not placed on removable parts		N/A
7.9	Marking or placing of switches which may cause a hazard		P
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means ..... :	By visual	P
	This applies also to switches which are part of a control		P
	If figures are used, the off position indicated by the figure 0		P
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		P
7.11	Indication for direction of adjustment of controls		P
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		N/A
	Instructions for portable appliances include substance of following (IEC 60335-2-23:2016):		--
	- when the hairdryer is used in a bathroom, unplug it after use since the proximity of water presents a hazard even when the hairdryer is switched off (IEC 60335-2-23:2016);		P
	- for additional protection, the installation of a residual current device (RCD) having a rated residual operating current not exceeding 30 mA is advisable in the electrical circuit supplying the bathroom. Ask your installer for advice. (IEC 60335-2-23:2016)		P
	If symbol ISO 7010-P026 (2011-05) is used the meaning shall be explained. Instructions shall also state the substance of the following: (IEC 60335-2-23:2016)		--
	WARNING Do not use this appliance near bathtubs, showers, basins or other vessels containing water. (IEC 60335-2-23		P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

	The instructions for facial saunas shall state that after use the appliance should be cleaned to avoid the accumulation of grease and other residues. (IEC 60335-2-23		N/A
	The instructions for hair straighteners and curling irons shall include the substance of the following: (IEC 60335-2-23:2016)		--
	- burn hazard. Keep appliance out of reach from young children, particularly during use and cool down; (IEC 60335-2-23:2016)		N/A
	- when the appliance is connected to the power supply, never leave it unattended; (IEC 60335-2-23:2016)		N/A
	- always place the appliance with the stand, if any, on a heat-resistant, stable flat surface. (IEC 60335-2-23:2016)		N/A
	The instructions for water filled foot care appliances shall include the substance of the following warnings: (IEC 60335-2-23:2016/AMD1:2019)		--
	WARNING: This appliance is intended to be used under the feet of a sitting person. (IEC 60335-2-23:2016/AMD1:2019)		N/A
	WARNING: If water leaks from the appliance, the appliance should no longer be used. (IEC 60335-2-23:2016/AMD1:2019)		N/A
	WARNING: Persons insensitive to heat must be careful when using the appliance. (IEC 60335-2-23:2016/AMD1:2019)		N/A
	The instructions state that:		--
	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction		P
	- children being supervised not to play with the appliance		P
	For a part of class III construction supplied from a detachable power supply unit, the instructions state that the appliance is only to be used with the unit provided		N/A
	Instructions for class III appliances state that it must only be supplied at SELV, unless		N/A
	it is a battery-operated appliance, the battery being charged outside the appliance		N/A
	For appliances for altitudes exceeding 2000 m, the maximum altitude is stated..... :		N/A

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

	The instructions for appliances incorporating a functional earth states that the appliance incorporates an earth connection for functional purposes only		N/A
7.12.1	Sufficient details for installation supplied		N/A
	Installation instructions for fixed hairdryers intended for use in bathrooms include substance of the following: This hairdryer must be fixed out of reach of a person taking a bath or shower. (IEC 60335-2-23:2016)		N/A
	Hand-held part of hairdryer incorporates electrical components, instructions state that the appliance must be fixed so that the hand-held part, when fully extended, is out of reach of a person taking a bath or shower (IEC 60335-2-23:2016)		N/A
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		N/A
	If different rated voltages or different rated frequencies are marked, the instructions state what action to be taken to adjust the appliance		N/A
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/A
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		--
	- dimensions of space		N/A
	- dimensions and position of supporting and fixing		N/A
	- minimum distances between parts and surrounding structure		N/A
	- minimum dimensions of ventilating openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N/A
	a switch complying with 24.3		N/A

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		--
	- max. inlet water pressure (Pa) ..... :		N/A
	- min. inlet water pressure, if necessary (Pa) ..... :		N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.12.9	Instructions specified in 7.12 and from 7.12.1 to 7.12.8 appear together before any other instructions supplied with the appliance		P
	Supplying of instructions in an alternative format is not required for fixed hand dryers and fixed hairdryers. (IEC 60335-2-23:2016)		N/A
	These instructions may be supplied with the appliance separately from any functional use booklet		N/A
	They may follow the description of the appliance that identifies parts, or follow the drawings/sketches		N/A
	In addition, instructions are also available in an alternative format such as on a website or on request from the user in a format such as a DVD		P
	In addition, instructions are also available in an alternative format such as on a website or in a format such as a DVD ..... :	Website	P
7.13	Instructions and other texts in an official language	English	P
7.14	Markings clearly legible and durable:		--
	Signal words WARNING, CAUTION, DANGER in uppercase having a height as specified ..... :		P
	Uppercase letter of the text explaining the signal word not smaller than 1,6 mm ..... :		P
	Moulded in, engraved, or stamped markings either raised above or have a depth below the surface of at least 0,25 mm, unless		N/A
	contrasting colours are used		P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	Markings checked by inspection, measurement and rubbing test as specified		P
	Outer diameter of the circle in symbol ISO 7010-P026 (2011-05) is at least 10 mm. (IEC 60335-2-23:2016)		P
7.15	Markings 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		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	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		P
	The symbol IEC 60417-5018 placed next to the symbol IEC 60417-5172 or IEC 60417-5180		N/A
	The additional marking required for portable hairdryers, curling irons and similar appliances may alternatively be on a warning flag tag that is permanently attached to the supply cord close to the plug. (IEC 60335-2-23:2016)		P
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N/A
8	**PROTECTION AGAINST ACCESS TO LIVE PARTS**		--
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20 N: no contact with live parts		P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N/A
8.1.4	Accessible part not considered live if:		--
	- safety extra-low a.c. voltage: peak value not exceeding 42,4 V		N/A
	- safety extra-low d.c. voltage: not exceeding 42,4 V		N/A
	- or separated from live parts by protective impedance		P
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0,7 mA		P
	- for peak values over 42,4 V up to and including 450 V, capacitance not exceeding 0,1 μF		N/A
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC	Certified Ionizer	P
	- for peak values over 15 kV, the energy in the discharge not exceeding 350 mJ		N/A
	All energized parts in water filled foot care appliances are considered to be live parts. - not applicable to class III appliances or class III constructions that have working voltage not exceeding 12 V. (IEC 60335-2-23:2016/AMD1:2019)		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		--
	- built-in appliances		N/A
	- fixed appliances		N/A
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
9	**STARTING OF MOTOR-OPERATED APPLIANCES**		--
	Requirements and tests are specified in part 2 when necessary		N/A
10	**POWER INPUT AND CURRENT**		--

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
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)	P
	If the power input varies throughout the operating cycle and the maximum value of the power input exceeds, by a factor greater than two, the arithmetic mean value of the power input occurring during a representative period, the power input is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the power input is the arithmetic mean value		P
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		P
	Representative period for appliances incorporating PTC heating elements is 30 min. (IEC 60335-2-23:2016)		N/A
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)	N/A
	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the current is the arithmetic mean value		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated current is related to the arithmetic mean value of the range		N/A
	Representative period for appliances incorporating PTC heating elements is 30 min. (IEC 60335-2-23:2016)		N/A
11	**HEATING**		--
11.1	No excessive temperatures in normal use		P
	For appliances incorporating swivel connection, compliance also checked by test of clause 11.101 (IEC 60335-2-23:2016)		N/A
11.2	The appliance is held, placed or fixed in position as described ..... :	Operated with unrestricted airflow directed downwards.	P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances intended to be used on a stand or attached to a support placed to give most unfavourable results (IEC 60335-2-23:2016)		N/A
	Hand-held appliances with an integral rest are also tested when placed on their rest away from the walls of the test corner. (IEC 60335-2-23:2016)		N/A
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		N/A
	the windings are non-uniform or it is difficult to make the necessary connections	(see appended table)	P
11.4	Heating appliances operated under normal operation at 1,15 times rated power input (W) ..... :	(see appended table)	P
	Temperature rise limits exceeded in appliances incorporating motors, transformers or electronic circuits, and power input is lower than rated power input, test repeated with appliance supplied at 1,06 times rated voltage (IEC 60335-2-23:2016)		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0,94 and 1,06 times rated voltage (V) ..... :		N/A
11.6	Combined appliances operated as heating appliances (IEC 60335-2-23:2016)		P
11.7	Appliances without timer operated (IEC 60335-2-23:2016):		--
	- for 30 min, for hand-held appliances (IEC 60335-2-23:2016);		P
	- in cycles of 30 s on and 5 s off until steady conditions established, for hand dryers that automatically controlled by presence of hands (IEC 60335-2-23:2016);		N/A
	- until steady conditions established, for other appliances (IEC 60335-2-23:2016).		N/A
	Appliances incorporating timer operated in cycles until steady conditions established. Each cycle consists of maximum operating time of timer (min) followed by rest period of 5 s (IEC 60335-2-23:2016) :		N/A
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 ..... :	(see appended table)	P
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of annex C are carried out		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Sealing compound does not flow out		N/A
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
	The temperature rise of detachable curlers is not measured. (IEC 60335-2-23:2016)		N/A
	The water temperature at the geometric centre of the water volume not exceeds 50 °C. (IEC 60335-2-23:2016) (IEC 60335-2-23:2016/AMD1:2019)		N/A
11.101	Appliances incorporating a swivel connection positioned with their major axis horizontal, supply cord hanging vertically. Pull force of 1 N applied to supply cord (IEC 60335-2-23:2016)		N/A
	Appliance supplied at rated voltage, current being 1,25 times rated current (IEC 60335-2-23:2016)		N/A
	Appliance rotated about its major axis at rate of approximately 50 rev/min, direction of rotation being reversed every 20 rev. Test carried out for 1500 rev (IEC 60335-2-23:2016)		N/A
	Temperature rise of sliding contacts not exceed 65 K (IEC 60335-2-23:2016)		N/A
13	**LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE**		--
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1,15 times the rated power input (W) ..... :		N/A
	Motor-operated appliances and combined appliances supplied at 1,06 times the rated voltage (V) ..... :	(see appended table)	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		P
13.2	The leakage current is measured by means of the circuit described in figure 4 of IEC 60990:1999		P
	For class 0I appliances and class I appliances, except parts of class II construction, C may be replaced by a low impedance ammeter		N/A
	Leakage current measurements..... :	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4 ..... :	(see appended table)	P
	No breakdown during the tests		P
14	**TRANSIENT OVERVOLTAGES**		--

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Clause	Requirement + Test	Result - Remark	Verdict

	Appliances withstand the transient over-voltages to which they may be subjected		N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6 ..... :	(see appended table)	N/A
	No flashover during the test, unless		N/A
	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited		N/A
15	**MOISTURE RESISTANCE**		--
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance		N/A
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529 ..... :	IPX0	N/A
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		N/A
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N/A
15.2	Spillage of liquid does not affect the electrical insulation		N/A
	Spillage solution comprising water containing approximately 1 % NaCl and 0,6 % rinsing agent		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts are removed		N/A
	Overfilling test with additional amount of the solution, over a period of 1 min (l)..... :		N/A
	The appliance withstands the electric strength test of 16.3		N/A
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
	Water filled foot care appliances are completely filled with the spillage solution and are then (IEC 60335-2-23:2016/AMD1:2019)		N/A
	emptied within 30 s by being tilted or overturned in the most unfavourable way. (IEC 60335-2-23:2016/AMD1:2019)		N/A
15.3	Appliances proof against humid conditions		P
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		P
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		P
	Humidity test for 48 h in a humidity cabinet	93% R.H.; 25°C	P
	Reassembly of those parts that may have been removed		P

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Clause	Requirement + Test	Result - Remark	Verdict

	The appliance withstands the tests of clause 16		P
16	**LEAKAGE CURRENT AND ELECTRIC STRENGTH**		--
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		P
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1,06 times rated voltage (V) ..... :	1,06 x 240 V=254,4 V	P
	Three-phase appliances: test voltage 1,06 times rated voltage divided by √3 (V)..... :		N/A
	Leakage current measurements..... :	(see appended table)	P
	Limit values doubled if:		--
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified .... :	(see appended table)	N/A
16.3	Electric strength tests according to table 7 ..... :	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified..... :		N/A
	No breakdown during the tests		P
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 ..... :	(see appended table)	N/A
	Appliance supplied with 1,06 or 0,94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V) ..... :		N/A
	Basic insulation is not short-circuited		N/A
	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/A
	Temperature of the winding not exceeding the value specified in table 8		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
18	**ENDURANCE**		--
	Requirements and tests are specified in part 2 when necessary		N/A
19	**ABNORMAL OPERATION**		--
19.1	The risk of fire, mechanical damage or electric shock 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)	P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		P
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		N/A
	if applicable, to the test of 19.5		N/A
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		P
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		P
	until steady conditions are established		P
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A
	Hairdryers also subjected to tests of clause 19.101 and 19.102 (IEC 60335-2-23:2016)		P
19.2	Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0,85 times rated power input (W) ..... :	(see appended table)	P
	Restricted heat dissipation is obtained as follows (IEC 60335-2-23:2016):		--
	- motors disconnected (IEC 60335-2-23:2016);		P

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Clause	Requirement + Test	Result - Remark	Verdict

	- hand-held hairdryers placed on floor of test corner in any stable position likely to occur (IEC 60335-2-23:2016);		P
	- appliances intended to be filled with water operated empty (IEC 60335-2-23:2016).		N/A
	- hand-held appliances without an integral rest are placed on the floor of the test corner in any stable position likely to occur (IEC 60335-2-23:2016).		P
	Hairdryers with flexible hood attachment also tested with motor operating, airflow through hose being restricted to give most unfavourable result (IEC 60335-2-23:2016)		N/A
	Heaters for detachable curlers placed on piece of low-density glass-fibre insulation having coefficient of thermal insulation of approximately 2,5 m²K/W (IEC 60335-2-23:2016)		N/A
19.3	Test of 19.2 repeated; test voltage (V), power input of 1,24 times rated power input (W) ..... :	(see appended table)	P
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		N/A
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 sheath		N/A
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N/A
	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/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N/A
	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 or until the PTC heating element ruptures (V)..... :		N/A
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or		P
	locking moving parts of other appliances		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	the capacitor is of class S2 or S3 of IEC 60252-1		N/A
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed..... :		N/A
	An electronic timer or programmer that operates to ensure compliance with the test before the maximum period under the conditions of clause 11 is reached, is a protective electronic circuit		N/A
	Test carried out for 5 min except for (IEC 60335-2-23:2016):		--
	- hand-held appliances (IEC 60335-2-23:2016);		P
	- appliances have to be kept switched on by hand (IEC 60335-2-23:2016);		N/A
	- appliances incorporating a timer (IEC 60335-2-23:2016).		N/A
	During and after the test, the appliance shall not emit flames. (IEC 60335-2-23:2016)		P
	Hand dryers are subjected to the test only if the locked rotor torque is less than the full load torque. (IEC 60335-2-23:2016).		N/A
	Other appliances supplied with rated voltage for a period as specified ..... :	30 seconds	P
	Winding temperatures not exceeding values specified in table 8..... :	(see appended table)	P
19.8	Multi-phase motors operated at rated voltage with one phase disconnected		P
19.10	Series motor operated at 1,3 times rated voltage for 1 min (V) ..... :		N/A
	Test carried out with heating elements disconnected or switched off (IEC 60335-2-23:2016)		N/A
	During the test, parts not being ejected from the appliance		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless		P
	they comply with the conditions specified in 19.11.1		P
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		P
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		P

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Clause	Requirement + Test	Result - Remark	Verdict
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		P
	During and after each test the following is checked:		--
	- the temperature of the windings do not exceed the values specified in table 8		P
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		P
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		--
	- the base material of the printed circuit board withstands the test of annex E		N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		--
	- 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	C2: 3,2W	P
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit		N/A
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		--
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		P
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless	C3: F1 open, repeated, same result, no hazards. C4: no word, no hazards.	P
	they comply with IEC 60384-14	Certified X capacitor	P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	U1: no word, no hazards. Q1: normal, no hazards.	P
	This fault condition is not applied between the two circuits of an optocoupler		N/A
	e) failure of triacs in the diode mode		P

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Clause	Requirement + Test	Result - Remark	Verdict
	f) failure of microprocessors and integrated circuits		P
	g) failure of an electronic power switching device		N/A
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		P
19.11.3	If the appliance incorporates a protective electronic circuit that operates to ensure compliance with clause 19, the appliance is tested as specified		P
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		P
	a device that can be placed in the stand-by mode,		N/A
	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode		P
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, the tests being carried out after the protective electronic circuit has operated, except that		P
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		P
	Surge protective devices disconnected, unless		P
	They incorporate spark gaps		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		P
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, at frequency ranges specified		P
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		P
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		P
	An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode		P
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling		N/A
	Earthed heating elements in class I appliances disconnected		N/A
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		P

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Clause	Requirement + Test	Result - Remark	Verdict

19.11.4.6	Appliances having a rated current not exceeding 16 A are subjected to the class 3 voltage dips and interruptions in accordance with IEC 61000-4-11		P
	Appliances having a rated current exceeding 16 A are subjected to the class 3 voltage dips and interruptions in accordance with IEC 61000-4-34		N/A
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		P
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60 s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate		P
	The appliance continues to operate normally, or		N/A
	requires a manual operation to restart		P
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A)..... :	Measuring current:77,4A	P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9 ..... :	(see appended table)	P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		--
	- basic insulation (V) ..... :	1000 V	P
	- supplementary insulation (V)..... :	1750 V	P
	- reinforced insulation (V) ..... :	3000 V	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		--
	- do not become operational, or		P
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		--
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited		N/A
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time		N/A
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		N/A
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		N/A
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/A
19.101	Hairdryers operated as specified in clause 11 until steady conditions established (IEC 60335-2-23:2016)		P
	Voltage at terminals of motor reduced until running speed of motor is just sufficient to prevent thermal cut-out from operating, power input to heating element being maintained at 1,15 times rated power input (IEC 60335-2-23:2016)		P
	Voltage is decreased at (IEC 60335-2-23:2016)		P
	- 1 V/min, for motors with working voltage not exceeding 30 V (IEC 60335-2-23:2016);		N/A
	- 5 V/min, for motors with working voltage exceeding 30 V (IEC 60335-2-23:2016).	310 V	P
	Appliance operated until steady conditions established (IEC 60335-2-23:2016)		P
	Test is repeated with the heat setting switch placed in each position. (IEC 60335-2-23:2016/AMD1:2019)		P

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Clause	Requirement + Test	Result - Remark	Verdict

	Voltage to the heating element is maintained at the value that gives 1,15 times rated power input with the switch at the highest heat setting position. (IEC 60335-2-23:2016/AMD1:2019)		P
19.102	Portable hair dryers operated under normal operation at 1,15 times rated power input (IEC 60335-2-23:2016)		P
	Sheet of polyethylene approximately 200 mm x 200 mm and having thickness of 50 µm placed against air-inlet and moved in any direction in order to reduce airflow so that most unfavourable conditions established (IEC 60335-2-23:2016)		P
	Test carried out for 30 min (IEC 60335-2-23:2016)		P
	Test repeated with airflow directed horizontally (IEC 60335-2-23:2016)		P
20	**STABILITY AND MECHANICAL HAZARDS**		--
20.1	Appliances having adequate stability (IEC 60335-2-23:2016/AMD1:2019)	Hand-held appliance	N/A
	Hand-held appliances with an integral rest have adequate stability when placed on the integral rest. (IEC 60335-2-23:2016/AMD1:2019)		N/A
	Compliance is tested as specified. (IEC 60335-2-23:2016/AMD1:2019)		N/A
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15° (IEC 60335-2-23:2016/AMD1:2019)		N/A
	If the appliance overturns in one or more positions, it is subjected to the tests of Clause 11 in each of these overturned positions. (IEC 60335-2-23:2016/AMD1:2019)		N/A
	During this test, temperature rises not exceed the values shown in Table 9. (IEC 60335-2-23:2016/AMD1:2019)		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable, and		P
	have adequate mechanical strength		P
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure		N/A
	Not possible to touch dangerous moving parts with the test probe described		P

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Clause	Requirement + Test	Result - Remark	Verdict

21	**MECHANICAL STRENGTH**		--
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J	(see appended table)	P
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
	Hand-held appliances also subjected to test of clause 21.101 (IEC 60335-2-23:2016)		P
	Water filled foot care appliances are loaded as specified for normal operation but with the mass increased to 90 kg. The mass is applied for 30 s. (IEC 60335-2-23:2016/AMD1:2019)		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
21.101	The hand-held part of the appliance is placed in a sling that is constructed by tying together the four corners of a single layer of cheesecloth. The lowest point of the sling is suspended at a height of 900 mm above a concrete or similar hard surface. (IEC 60335-2-23:2016/AMD1:2019)		P
	The hand-held part of the appliance in the sling is dropped from a stationary position. The test is carried out a total of five times with the hand-held part of the appliance being positioned so that it falls onto the concrete surface in five different orientations. (IEC 60335-2-23:2016/AMD1:2019)		P
	The appliance shall not be damaged to such an extent that compliance with 8.1 and Clause 29 is impaired. (IEC 60335-2-23:2016/AMD1:2019)		P
22	**CONSTRUCTION**		--

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Clause	Requirement + Test	Result - Remark	Verdict

22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IPX0	N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		--
	- a supply cord fitted with a plug, or		N/A
	- a switch complying with 24.3, or		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		N/A
	- an appliance inlet		N/A
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0,25 Nm		N/A
	Pull force of 50 N 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 1 mm		N/A
	Each pin subjected to a torque of 0,4 Nm; the pins are not rotating, unless		N/A
	rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A
22.5	No risk of electric shock when touching pins, for appliances having a capacitor with rated capacitance equal to or greater than 0,1 μF, the appliance being disconnected from the supply at the instant of voltage peak		P
	Voltage not exceeding 34 V (V)..... :	Max: 4,3V	P
	If compliance relies on the operation of an electronic circuit, the electromagnetic phenomena tests of 19.11.4.3 and 19.11.4.4 are applied		N/A
	The discharge test is then repeated three times, voltage not exceeding 34 V (V) ..... :		N/A
22.6	Electrical insulation not affected by condensing water or leaking liquid		N/A
	Electrical insulation of class II appliances not affected if a hose ruptures or seal leaks		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	In case of doubt, test as described		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		P
	the substance has adequate insulating properties		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N/A
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner, if loosening result in a hazard		P
	Removing or fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible, if resulting in a hazard		P
	A choking hazard does not apply to appliances for commercial use		N/A
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		P
	If the part is removed and can be contained within the small parts cylinder, it is considered to be a choking hazard		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
	To avoid accidental contact with hot surfaces, the handle of curling irons and hair straighteners shall be clearly identified by tactile means, or colour or other visual means. (IEC 60335-2-23:2016)		N/A
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 or other fasteners, likely to be touched by the user in normal use or during user maintenance		N/A
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N/A
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos		P

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Clause	Requirement + Test	Result - Remark	Verdict

22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported		P
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		P
	Heating element also be unlikely to come into contact with skin or hair if it ruptures (IEC 60335-2-23:2016)		P
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		P
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		P
22.28	Metal parts of class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		N/A
	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		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P

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Clause	Requirement + Test	Result - Remark	Verdict

	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Ceramic and similar porous material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
	Supplementary insulation and reinforced insulation in class II curling irons and hair straighteners shall be resistant to aging. (IEC 60335-2-23:2016)		N/A
	Insulation mentioned in Table 3 is considered to be resistant to aging. (IEC 60335-2-23:2016)		N/A
	Test samples kept in ventilated heating cabinet as specified: The samples are kept in the cabinet for 240 h and then at ambient temperature for at least 16 h. (IEC 60335-2-23:2016)		N/A
	Samples show no cracks and withstand the electric strength test of 16.3 for supplementary insulation. (IEC 60335-2-23:2016)		N/A
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts, or		N/A
	unearthed metal parts separated from live parts by basic insulation only		N/A
	Electrodes not used for heating liquids		N/A
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances and cordless appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		P
	they are separated from live parts by double or reinforced insulation		P
	Class I appliances, other than hand dryers and face dryers, metal parts could be in contact with skin or hair in normal use separated from live parts by double insulation or reinforced insulation and (IEC 60335-2-23:2016)		N/A
	not be earthed (IEC 60335-2-23:2016).		N/A
22.37	Capacitors in class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		P
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		N/A

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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		P
	Switch in off-position disconnect electronic circuits, unless compliance with clause 19 does not depend on operation of self-resetting thermal cut-out (IEC 60335-2-23:2016)	Self-resetting thermal cut-out was shorted circuit during clause 19	P
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components	Certified Ionizer	P
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		P
	Resistors checked by the test of 14.1 a) in IEC 60065		P
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		N/A
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		N/A
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		--
	- continuously, or		N/A
	- automatically, or		N/A
	- remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts have at least double insulation or reinforced insulation between live parts and the functionally earthed parts		N/A
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N/A
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N/A
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 ..... :	By shape	P
	The requirement concerning position does not preclude use of a push on push off switch		P
	An indication when the device has been operated is given by:		--
	- tactile feedback from the actuator or from the appliance, or		P

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Clause	Requirement + Test	Result - Remark	Verdict

	- reduction in heat output; or		P
	- audible and visible feedback		P
22.56	Detachable power supply part provided with the part of class III construction		N/A
22.57	The properties of non-metallic materials do not degrade from exposure to UV-C radiation, as specified in annex T		N/A
	This requirement does not apply to glass, ceramics or similar materials		N/A
22.101	Appliances with steam-producing or spray-producing devices constructed so that there is no spillage or unintentional burst of steam or water that likely to cause hazard (IEC 60335-2-23:2016)		N/A
22.102	Curling rollers of permanent-wave appliances with integral heating elements supplied with safety extra-low voltage not exceeding 24 V (IEC 60335-2-23:2016)		N/A
22.103	Hairdryers are fitted with a grid or similar protection means to limit the risk of hair being sucked into the air intake. (IEC 60335-2-23:2016)		P
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/A
	Wiring effectively prevented from coming into contact with moving parts		P
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges		P
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		N/A
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use, or		N/A
	100 flexings for conductors flexed during user maintenance		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Number of flexings for conductors that only flexed when appliance stored is 5000 (IEC 60335-2-23:2016)		N/A
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		N/A
	Not more than 10 % of the strands of any conductor broken, and		N/A
	not more than 30 % for wiring supplying circuits that consume no more than 15 W		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		P
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use		P
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		N/A
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
	For class II construction, the requirements for supplementary insulation and reinforced insulation apply,		N/A
	except that the sheath of a cord complying with IEC 60227 or IEC 60245 may provide supplementary insulation.		N/A
	A single layer of internal wiring insulation does not provide reinforced insulation		P
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or		N/A
	be such that it can only be removed by breaking or cutting		N/A
23.7	The colour combination green/yellow only used for earthing conductors		N/A
23.8	Aluminium wires not used for internal wiring		P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		N/A
	the contact pressure is provided by spring terminals		N/A
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	**COMPONENTS**		--

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Clause	Requirement + Test	Result - Remark	Verdict

24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components ..... :	(see appended table)	P
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		P
	Relays tested as part of the appliance, or		N/A
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		N/A
	The requirements of clause 29 apply between live parts of components and accessible parts of the appliance		P
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard		P
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections		P
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2		P
	Components that have been previously tested to comply with the resistance to fire requirements in the IEC standard for the relevant component need not be retested provided the specified conditions are met		P
	If these conditions are not satisfied, the component is tested as part of the appliance.		P
	Power electronic converter circuits not required to comply with IEC 62477-1, they are tested as part of the appliance		N/A
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		P
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N/A
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		P
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, comply with IEC 60384-14	Certified component	P
	If the capacitors have to be tested, they are tested according to annex F		N/A
24.1.2	Transformers in associated switch mode power supplies comply with annex BB of IEC 61558-2-16		N/A
	Safety isolating transformers comply with IEC 61558-2-6		N/A
	If they have to be tested, they are tested according to annex G		N/A
24.1.3	Switches comply with IEC 61058-1, the number of cycles of operation being at least 10 000		N/A
	If they have to be tested, they are tested according to annex H		P
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N/A
	Switches incorporated in hand dryers subjected to 50 000 cycles of operation (IEC 60335-2-23:2016)		N/A
24.1.4	Automatic controls comply with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		--
	- thermostats:..... 10 000		N/A
	- temperature limiters:..... 1 000		N/A
	- self-resetting thermal cut-outs:..... 300	Certified component	P
	- voltage maintained non-self-resetting thermal cut-outs:..... 1 000		N/A
	- other non-self-resetting thermal cut-outs: 30		N/A
	- timers:..... 3 000		N/A
	- energy regulators: 10 000		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited		N/A
	Thermal motor protectors are tested in combination with their motor under the conditions specified in annex D		N/A
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A
	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9		N/A
24.1.5	Appliance couplers comply with IEC 60320-1		N/A
	However, for class II appliances classified higher than IPX0, the appliance couplers comply with IEC 60320-2-3		N/A
	Interconnection couplers comply with IEC 60320-2-2		N/A
24.1.6	Small lamp holders similar to E10 lampholders comply with IEC 60238, the requirements for E10 lampholders being applicable		N/A
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691	Certified components	P
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		N/A
	They are also tested in accordance with clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance..... :		N/A
24.2	Helmet-type hairdryers and permanent-wave appliances incorporate switch in flexible cord (IEC 60335-2-23:2016)		N/A
	Appliances not fitted with:		--
	- switches, automatic controls or power supplies in flexible cords		P

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Clause	Requirement + Test	Result - Remark	Verdict

	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	- thermal cut-outs that can be reset by soldering, unless		P
	the solder has a melding point of at least 230 °C		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		N/A
	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/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N/A
	In addition, the motors comply with the requirements of annex I		N/A
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		N/A
	One or more of the following conditions are to be met:		--
	- the capacitors are of class S2 or S3 according to IEC 60252-1		N/A
	- the capacitors are housed within a metallic or ceramic enclosure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N/A
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of annex E		N/A
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N/A
24.101	Protective devices incorporated in fixed hand dryers in order to comply with 19.2 and 19.3 not be self-resetting. (IEC 60335-2-23:2016)		N/A
25	**SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS**		--
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		--
	- supply cord fitted with a plug, the current rating and voltage rating of the plug being not less than the corresponding ratings of its associated appliance		P
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or		N/A
	- pins for insertion into socket-outlets		N/A
25.2	Appliance not provided with more than one means of connection to the supply mains		P
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A
25.3	Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains:		--
	- a set of terminals allowing the connection of a flexible cord		N/A
	- a fitted supply cord		N/A
	- a set of supply leads accommodated in a suitable compartment		N/A
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm) ..... :		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29		N/A
25.5	Method for assembling the supply cord to the appliance:		--
	- type X attachment		N/A
	- type Y attachment		P
	- type Z attachment, if allowed in relevant part 2		N/A
	Type X attachment is not allowed if the supply cord is fitted with a warning flag tag. (IEC 60335-2-23:2016)		N/A
	- type Z attachment allowed for (IEC 60335-2-23:2016):		--
	- hand-held appliances (IEC 60335-2-23:2016);		N/A
	- hairdryers with flexible hood attachment (IEC 60335-2-23:2016);		N/A
	- heaters for detachable curlers having not more than 10 curlers (IEC 60335-2-23:2016).		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		--
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11		--
	- light polyvinyl chloride sheathed cord (60227 IEC 52) are allowed regardless of the mass of the appliance. (IEC 60335-2-23:2016)		N/A
	- ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances	H05VV-F	P

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Clause	Requirement + Test	Result - Remark	Verdict

	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		--
	- heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg		N/A
	- heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances		N/A
	- halogen-free, low smoke, thermoplastic insulated and sheathed		--
	- light duty halogen-free low smoke flexible cable (62821 IEC 101) for circular cable and (62821 IEC 101f) for flat cable		N/A
	- Ordinary duty halogen-free low smoke flexible cable (62821 IEC 102) for circular cable and (62821 IEC 102f(for flat cable		N/A
	Supply cords for class III appliances adequately insulated		N/A
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N/A
	Temperature rise limit of 75 K is increased to 130 K provided that the temperature rise decreases to 75 K within 5 min of the appliance being switched off. (IEC 60335-2-23:2016)		N/A
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm^2)..... :	Rated current: 5,0 A Cross-sectional area: 0,75 mm^2, (L<2m)	P
25.9	Supply cords not in contact with sharp points or edges		P
25.10	Supply cord of class I appliances have a green/yellow core for earthing		N/A
	In multi-phase appliances, the colour of the neutral conductor of the supply cord is blue		N/A
	Where additional neutral conductors are provided in the supply cord:		--
	- other colours may be used for these additional neutral conductors;		N/A
	- all of the neutral conductors and line conductors are identified by marking using the alpha numeric notation specified in IEC 60445		N/A
	- the supply cord is fitted to the appliance		N/A
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless		N/A
	the contact pressure is provided by spring terminals		N/A
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

25.13	Inlet openings so constructed as to prevent damage to the supply cord		P
	If it is not evident that the supply cord can be introduced without risk of damage, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N/A
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is		N/A
	class 0, or		N/A
	a class III appliance not containing live parts		N/A
25.14	Supply cords moved while in operation adequately protected against excessive flexing		P
	Force applied to supply cord of appliances provided with a swivel connection is		--
	- 20 N, for cords having nominal cross-sectional area exceeding 0,75 mm² (IEC 60335-2-23:2016);		N/A
	- 10 N, for other cords (IEC 60335-2-23:2016).		P
	The appliance is mounted so that the direction of flexing corresponds to that most likely to occur when the supply cord is wound around the appliance for storage. (IEC 60335-2-23:2016).		P
	Unless incorporating a swivel connection, hand-held appliances are additionally tested while mounted on an apparatus similar to that of Figure 8 with the supply cord hanging vertically and loaded with a force of 10 N. The oscillating part of the apparatus is moved through an angle of 180° and back to the original position. The number of flexings is 10 000, the rate of flexing being 6 per min. (IEC 60335-2-23:2016).		P
	Flexing test, as described:		--
	- applied force (N) ..... :	10 N	P
	- number of flexings ..... :	10 000 cycles	P
	The test does not result in:		--
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		P
	- breakage of more than 10% of the strands of any conductor		P
	- separation of the conductor from its terminal		P
	- loosening of any cord guard		P
	- damage to the cord or the cord guard		P
	- broken strands piercing the insulation and becoming accessible		P

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Clause	Requirement + Test	Result - Remark	Verdict
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord:		--
	- fixed appliances: pull 100 N; torque (not on automatic cord reel) (Nm)..... :		N/A
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm)..... :	Mass: 0,5 kg; Pull: 30 N; Torque:0,1 Nm	P
	Swivel connection not locked during tests (IEC 60335-2-23:2016)		N/A
	For appliances with a swivel connection, the value of 30 N in Table 12 is increased to 60 N. (IEC 60335-2-23:2016)		N/A
	Cord not damaged and max. 2 mm displacement of the cord	0,4 mm	P
25.16	Cord anchorages for type X attachments constructed and located so that:		--
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of supply cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N/A
	they are separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N/A
	it is part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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

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Clause	Requirement + Test	Result - Remark	Verdict

	the supply cord is unlikely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except that:		--
	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11		N/A
	- the thickness of the insulation may be reduced		N/A
	- for class I or class II appliance with class III construction, the cross sectional areas of the conductors need not comply with 25.8 if specified conditions are met		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected		N/A
25.25	Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet.		N/A
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N/A
25.101	Swivel connections adequate for normal use of appliance (IEC 60335-2-23:2016)		N/A
	Appliance operated under conditions specified in clause 11.101, number of revolutions being increased to 20 000 (IEC 60335-2-23:2016)		N/A
	After test, swivel connection and supply cord fit for further use. Live parts not become accessible and appliance withstand electric strength test of 16.3 (IEC 60335-2-23:2016)		N/A
26	**TERMINALS FOR EXTERNAL CONDUCTORS**		--
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A
26.2	Appliances with type X attachment and appliances for the connection of cables of fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		N/A
	the connections are soldered		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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

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Clause	Requirement + Test	Result - Remark	Verdict
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm²)..... :		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		N/A
	conductors ends fitted with means suitable for screw terminals		N/A
	Terminals with screw clamping and screwless terminals not used for type X attachments in appliances incorporating swivel connection (IEC 60335-2-23:2016)		N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used		P
	For class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		P
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		N/A
27	**PROVISION FOR EARTHING**		--
27.1	Accessible metal parts of class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		N/A
	Earthing terminals and earthing contacts not connected to the neutral terminal		N/A
	Class 0, II and III appliances have no provision for protective earthing	Class II appliance	P
	Class II appliances and class III appliances can incorporate an earth for functional purposes		N/A
	Safety extra-low voltage circuits not earthed, unless		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict

	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω)..... :		N/A
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
28	**SCREWS AND CONNECTIONS**		--
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		P
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity		N/A
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		N/A
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		N/A
	For screws and nuts; torque-test as specified in table 14..... :	(see appended table)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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

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Clause	Requirement + Test	Result - Remark	Verdict

	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion		N/A
29	**CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION**		--
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies ..... :		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation ..... :		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless ..... :	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500 V and above are increased by 0,5 mm and the impulse voltage test is not applicable		P
	For appliances intended for use at altitudes exceeding 2 000 m, the clearances in Table 16 is increased according to the relevant multiplier values in Table A.2 of IEC 60664-1		N/A
	Impulse voltage test is not applicable:		--
	- when the microenvironment is pollution degree 3, or		N/A
	- for basic insulation of class 0 and class 01 appliances, or		N/A
	- to appliances intended for use at altitudes exceeding 2 000 m		N/A
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P

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

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Clause	Requirement + Test	Result - Remark	Verdict
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160 % of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree..... :	(see appended table)	P
	Pollution degree 2 applies, unless		P
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- insulation subjected to conductive pollution; pollution degree 3		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17..... :	(see appended table)	P

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Clause	Requirement + Test	Result - Remark	Verdict

	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17 ..... :		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 ..... :		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable ..... :		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable ..... :		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18..... :	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18 ..... :		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		P
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		--
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- for insulation, other than single layer internal wiring insulation, by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
	Curling irons and hair straighteners, distance through insulation between metal parts separated by supplementary insulation reduced to 0,6 mm, provided that distance through basic insulation at least 1 mm (IEC 60335-2-23:2016)		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consist of at least 2 layers		N/A
	Reinforced insulation consist of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N/A
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19..... :		N/A
30	**RESISTANCE TO HEAT AND FIRE**		--
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	parts of thermoplastic material providing supplementary or reinforced insulation		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C)..... :	(see appended table 30.1)	P
	Parts supporting live parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C)..... :	(see appended table 30.1)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C) ..... :		N/A
	Hand dryers and hairdryers, temperature rises occurring during tests of clause 19 not taken into account (IEC 60335-2-23:2016)		P
30.2	Parts of non-metallic material resistant to ignition and spread of fire		P
	This requirement does not apply to:		--
	parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or		P
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		P
	Compliance checked by the test of 30.2.1, and in addition:		P
	- for attended appliances, 30.2.2 applies		P
	- for unattended appliances, 30.2.3 applies		N/A
	Heaters for detachable curlers, 30.2.3 is applicable (IEC 60335-2-23:2016)		N/A
	Other appliances, 30.2.2 is applicable (IEC 60335-2-23:2016)		P
	For appliances for remote operation, 30.2.3 applies		N/A
	For base material of printed circuit boards, 30.2.4 applies		P
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C	(see appended table 30.2)	P
	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or		N/A
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N/A
30.2.2	Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and		N/A
	parts of non-metallic material within a distance of 3 mm of such connections,		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	subjected to the glow-wire test of IEC 60695-2-11 with appropriate severity level:	(see appended table 30.2)	N/A
	- 750 °C, for connections carrying a current exceeding 0,5 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	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 0,5 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	The glow-wire test is also not carried out on small parts. These parts are to:		--
	- comprise material having a glow-wire flammability index of at least 750 °C, or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of annex E, or	(see appended table 30.2/30.2.4)	N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10 ..... :		N/A
	Glow-wire test not applicable to conditions as specified ..... :	Hand-held appliance	P
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		N/A
	The tests are not applicable to conditions as specified ..... :		N/A
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and		N/A
	parts of non-metallic material, other than small parts, within a distance of 3 mm,		N/A
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C	(see appended table 30.2)	N/A
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C		N/A
30.2.3.2	Parts of non-metallic material supporting connections, and		N/A
	parts of non-metallic material within a distance of 3 mm,		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	subjected to the glow-wire test of IEC 60695-2-11 with appropriate severity level:	(see appended table 30.2)	N/A
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications:		--
	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N/A
	- 775 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 675 °C, for other connections		N/A
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:		N/A
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	The glow-wire test is also not carried out on small parts. These parts are to:		--
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of annex E, or		N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	The consequential needle-flame test of annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		--
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		N/A
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	- small parts for which the needle-flame test of annex E was applied, or		N/A
	- small parts for which a material classification of V-0 or V-1 was applied		N/A
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		--
	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or		N/A
	- parts shielded by a flame barrier that meets the needle-flame test of annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of annex E		N/A
	Test not applicable to conditions as specified ..... :	Hand-held appliance	P
30.101	Helmet-type hairdryers be resistant to fire (IEC 60335-2-23:2016)		N/A
	Compliance checked by inspection and by applying needle-flame test of annex E to (IEC 60335-2-23:2016):		--
	- parts of non-metallic material enclosing heating element and other electrical components (IEC 60335-2-23:2016);		N/A
	- non-metallic parts within the enclosure (IEC 60335-2-23:2016).		N/A
	Needle-flame test not carried out on material classified as V-0 or V-1 according to IEC 60695-11-10, provided that test sample not thicker than relevant part (IEC 60335-2-23:2016)		N/A
31	**RESISTANCE TO RUSTING**		--
	Relevant ferrous parts adequately protected against rusting		P
	Tests specified in part 2 when necessary		N/A
32	**RADIATION, TOXICITY AND SIMILAR HAZARDS**		--
	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use		P
	Compliance is checked by the limits or tests specified in part 2, if relevant		N/A
A	**ANNEX A (INFORMATIVE)** **ROUTINE TESTS**		--
	Description of routine tests to be carried out by the manufacturer		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

B	**ANNEX B (NORMATIVE)** **APPLIANCES POWERED BY RECHARGEABLE BATTERIES THAT ARE RECHARGED IN THE APPLIANCE**		--
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	Three forms of construction covered:		--
	a) Appliance supplied directly from the supply mains or a renewable energy source, the battery charging circuitry and other supply unit circuitry incorporated within the appliance		N/A
	b) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the part of the appliance containing the battery		N/A
	c) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the detachable supply unit		N/A
3.1.9	Appliance operated under the following conditions:		--
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A
	- 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		N/A
	- 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/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage (V) and polarity of the terminals ..... :		N/A
	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Appliances intending to be supplied from a detachable supply unit marked with symbol IEC 60417-6181 and its type reference along with symbol ISO 7000-0790 (2004-01), or		N/A
	use only with <model designation> supply unit ... :		N/A
7.6	Additional symbols		N/A
7.12	The instructions give information regarding charging		N/A
	Instructions for appliances incorporating batteries intended to be replaced by the user include required information		N/A
	Instructions for appliances containing non user-replaceable batteries state the substance of the following:		--
	This appliance contains batteries that are only replaceable by skilled persons		N/A
	Instructions for appliances containing non-replaceable batteries shall state the substance of the following:		--
	This appliance contains batteries that are non-replaceable		N/A
	For appliances intending to be supplied from a detachable supply unit for the purposes of recharging the battery, the type reference of the detachable supply unit is stated along with the following:		--
	WARNING: For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance		N/A
	If the symbol for detachable supply unit is used, its meaning is explained		N/A
7.15	Markings placed on the part of the appliance connected to the supply mains		N/A
	The type reference of the detachable supply unit is placed in close proximity to the symbol		N/A
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/A
	If the appliance can be operated without batteries, double or reinforced insulation required		N/A
11.7	The battery is charged for the period stated in the instructions or 24 h ..... :		N/A
11.8	Temperature rise of the battery surface does not exceed the limit in the battery manufacturer's specification; measured (K); limit (K) ..... :		N/A
	If no limit specified, the temperature rise does not exceed 20 K; measured (K) ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

19.1	Appliances subjected to tests of 19.B.101, 19.B.102 and 19.B.103		N/A
19.10	Not applicable		N/A
19.B.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A
19.B.102	For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged,		N/A
19.B.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/A
19.13	The battery does not rupture or ignite		N/A
21.B.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being:		--
	- 100, if the mass of the part does not exceed 250 g (g) ..... :		N/A
	- 50, if the mass of the part exceeds 250 g ..... :		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts		N/A
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
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/A
	Test conditions as specified		N/A
D	**ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS**		--
	Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Test conditions as specified		N/A
E	**ANNEX E (NORMATIVE)** **NEEDLE-FLAME TEST**		--
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		--
7	Severities		--
	The duration of application of the test flame is 30 s ± 1 s		N/A
9	Test procedure		--
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1		N/A
9.2	The first paragraph does not apply		N/A
	If possible, the flame is applied at least 10 mm from a corner		N/A
9.3	The test is carried out on one specimen		N/A
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N/A
11	Evaluation of test results		--
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		N/A
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:		--
1.5	Terms and definitions		--
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A
1.6	Marking		--
	Items a) and b) are applicable		N/A
3.4	Approval testing		--
3.4.3.2	Table 3 is applicable as described		N/A
4.1	Visual examination and check of dimensions		--
	This subclause is applicable		N/A
4.2	Electrical tests		--
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.2.5.2	Only table 11 is applicable		N/A
	Values for test A apply		N/A
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		--
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		--
	This subclause is applicable		N/A
4.14	Endurance		--
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable		N/A
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	No visible damage		N/A
4.17	Passive flammability test		--
	This subclause is applicable		N/A
4.18	Active flammability test		--
	This subclause is applicable		N/A
G	**ANNEX G (NORMATIVE)** **SAFETY ISOLATING TRANSFORMERS**		--
	The following modifications to this standard are applicable for safety isolating transformers:		--
7	Marking and instructions		--
7.1	Transformers for specific use marked with:		--
	- name, trademark or identification mark of the manufacturer or responsible vendor..... :		N/A
	- model or type reference ..... :		N/A
17	Overload protection of transformers and associated circuits		--
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		--
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N/A
29	Clearances, creepage distances and solid insulation		--
29.1, 29.2, 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances		N/A
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed		N/A
	For safety isolating transformers subjected to periodic voltages with a frequency exceeding 30 kHz, the clearances, creepage distances and solid insulation values specified in IEC 60664-4 are applicable, if greater than the values specified in items 2a, 2c and 3 in table 13 of IEC 61558-1		N/A
H	**ANNEX H (NORMATIVE) SWITCHES**		--
	Switches comply with the following clauses of IEC 61058-1, as modified below:		--
	The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		P
	Before being tested, switches are operated 20 times without load		P
8	Marking and documentation		--
	Switches are not required to be marked		P
	However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		--
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		--
15.1	Not applicable		N/A
15.2	Not applicable		N/A
15.3	Applicable for full disconnection and micro-disconnection		P
17	Endurance		--
	Compliance is checked on three separate appliances or switches		P
	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless		P
	otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335..... :		N/A
	Switches for operation under no load and which can be operated only by a tool, and		N/A
	switches operated by hand that are interlocked so that they cannot be operated under load,		N/A
	are not subjected to the tests		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation		P
	Subclauses 17.2.2 and 17.2.5.2 not applicable		P
	The ambient temperature during the test is that occurring in the appliance during the test of clause 11 in IEC 60335-1		P
	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K) ..... :	8,3 K	P
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		--
	Clause 20 is applicable to clearances across full disconnection and micro-disconnection		P
	It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24		P
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:		--
8	Protection against access to live parts		--
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		--
11.3	The temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	The 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/A
16	Leakage current and electric strength		--
16.3	Insulation between live parts of the motor and its other metal parts is not subjected to the test		N/A
19	Abnormal operation		--
19.1	The tests of 19.7 to 19.9 are not carried out		N/A
19.I.101	Appliance operated at rated voltage with each of the following fault conditions:		--
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A

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	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		--
22.I.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/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
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:		--
5.7	Conditioning of the test specimens		--
	When production samples are used, three samples of the printed circuit board are tested		N/A
5.7.1	Cold		--
	The test is carried out at -25 °C		N/A
5.7.3	Rapid change of temperature		--
	Severity 1 is specified		N/A
5.9	Additional tests		--
	This subclause is not applicable		N/A
K	**ANNEX K (NORMATIVE)** **OVERVOLTAGE CATEGORIES**		--
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	**ANNEX L (INFORMATIVE)** **GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES**		--
	Information for the determination of clearances and creepage distances		P
M	**ANNEX M (NORMATIVE)** **POLLUTION DEGREE**		--
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		--
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		--
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		--
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N/A
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		P
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		P
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
N	**ANNEX N (NORMATIVE)** **PROOF TRACKING TEST**		--
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		--
7	Test apparatus		--
7.3	Test solutions		--

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Clause	Requirement + Test	Result - Remark	Verdict

	Test solution A is used		P
10	Determination of proof tracking index (PTI)		--
10.1	Procedure		--
	The proof voltage is 100 V, 175 V, 400 V or 600 V ..... :	175 V	P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25 V, the number of drops increased to 100		N/A
10.2	Report		--
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	**ANNEX O (INFORMATIVE)** **SELECTION AND SEQUENCE OF THE TESTS OF clause 30**		--
	Description of tests for determination of resistance to heat and fire		P
P	**ANNEX P (INFORMATIVE)** **GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN TROPICAL CLIMATES**		--
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a tropical climate and that are marked with symbol IEC 60417-6332		--
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a tropical climate and that are marked with symbol IEC 60417-6332, if liable to be connected to a supply mains that excludes the protective earthing conductor		--
5.7	The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C		N/A
7.1	The appliance marked with symbol IEC 60417-6332		N/A
7.12	The instructions state that the appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA		N/A
	The instructions state that the appliance is considered to be suitable for use in countries having a tropical climate, but may also be used in other countries		N/A
	If symbol IEC 60417-6332 is used, its meaning is explained		N/A
11.8	The values of Table 3 are reduced by 15 K		N/A
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

15.3	The value of t is 37 °C		N/A
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):		N/A
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		N/A
Q	**ANNEX Q (INFORMATIVE)** **SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS**		--
	Description of tests for appliances incorporating electronic circuits		P
R	**ANNEX R (NORMATIVE)** **SOFTWARE EVALUATION**		--
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex		N/A
R.1	Programmable electronic circuits using software		--
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 constructed so that the software does not impair compliance with the requirements of this standard		N/A
R.2	Requirements for the architecture		--
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety-related segments of the software		N/A
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:		--
	- single channel with periodic self-test and monitoring		N/A
	- dual channel (homogenous) with comparison		N/A
	- dual channel (diverse) with comparison		N/A
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures:		--
	- single channel with functional test		N/A
	- single channel with periodic self-test		N/A
	- dual channel without comparison		N/A
R.2.2	Measures to control faults/errors		--

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Clause	Requirement + Test	Result - Remark	Verdict
R.2.2.1	When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area		N/A
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison		N/A
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths		N/A
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate		N/A
R.2.2.5	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, detection of a fault/error occur before compliance with clause 19 is impaired		N/A
R.2.2.6	The software is referenced to relevant parts of the operating sequence and the associated hardware functions		N/A
R.2.2.7	Labels used for memory locations are unique		N/A
R.2.2.8	The software is protected from user alteration of safety-related segments and data		N/A
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 is impaired		N/A
R.3	Measures to avoid errors		--
R.3.1	General		--
	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the following measures to avoid systematic fault in the software are applied		--
	Software that incorporates measures used to control the fault/error conditions specified in table R.2 is inherently acceptable for software required to control the fault/error conditions specified in table R.1		N/A

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R.3.2	Specification		--
R.3.2.1	Software safety requirements:	Software Id:	N/A
	The specification of the software safety requirements includes the descriptions listed		N/A
R.3.2.2	Software architecture		--
R.3.2.2.1	The specification of the software architecture includes the aspects listed - techniques and measures to control software faults/errors (refer to R.2.2); - interactions between hardware and software; - partitioning into modules and their allocation to the specified safety functions; - hierarchy and call structure of the modules (control flow); - interrupt handling; - data flow and restrictions on data access; - architecture and storage of data; - time-based dependencies of sequences and data	Document ref. No:	N/A
R.3.2.2.2	The architecture specification is validated against the specification of the software safety requirements by static analysis		N/A
R.3.2.3	Module design and coding		--
R.3.2.3.1	Based on the architecture design, software is suitably refined into modules		N/A
	Software module design and coding is implemented in a way that is traceable to the software architecture and requirements		N/A
R.3.2.3.2	Software code is structured		N/A
R.3.2.3.3	Coded software is validated against the module specification by static analysis		N/A
	The module specification is validated against the architecture specification by static analysis		N/A
R.3.3.3	Software validation		--
	The software is validated with reference to the requirements of the software safety requirements specification		N/A
	Compliance is checked by simulation of:		--
	- input signals present during normal operation		N/A
	- anticipated occurrences		N/A
	- undesired conditions requiring system action		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

TABLE R.1 [e] – GENERAL FAULT/ERROR CONDITIONS						
Component [a]	Fault/error	Acceptable measures [b, c]	Definitions	Document reference for applied measure	Document reference for applied test	Ver-dict
1 CPU 1.1 Registers	Stuck at	Functional test, or periodic self-test using either: - static memory test, or - word protection with single bit redundancy	H.2.16.5 H.2.16.6 H.2.19.6 H.2.19.8.2			N/A
1.2 VOID						N/A
1.3 Programme counter	Stuck at	Functional test, or Periodic self-test, or Independent time-slot monitoring, or Logical monitoring of the programme sequence	H.2.16.5 H.2.16.6 H.2.18.10.4 H.2.18.10.2			N/A
2 Interrupt handling and execution	No interrupt or too frequent interrupt	Functional test, or time-slot monitoring	H.2.16.5 H.2.18.10.4			N/A
3 Clock	Wrong frequency (for quartz synchronized clock: harmonics/ sub-harmonics only)	Frequency monitoring, or time slot monitoring	H.2.18.10.1 H.2.18.10.4			N/A
4. Memory 4.1 Invariable memory	All single bit faults	Periodic modified checksum, or multiple checksum, or word protection with single bit redundancy	H.2.19.3.1 H.2.19.3.2 H.2.19.8.2			N/A
4.2 Variable memory	DC fault	Periodic static memory test, or word protection with single bit redundancy	H.2.19.6 H.2.19.8.2			N/A
4.3 Addressing (relevant to variable and invariable memory)	Stuck at	Word protection with single bit redundancy including the address	H.2.19.8.2			N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5 Internal data path	Stuck at	Word protection with single bit redundancy	H.2.19.8.2			N/A
5.1 VOID						N/A
5.2 Addressing	Wrong address	Word protection with single bit redundancy including the address	H.2.19.8.2			N/A
6 External communication	Hamming distance 3	Word protection with multi-bit redundancy, or CRC – single work, or Transfer redundancy, or Protocol test	H.2.19.8.1 H.2.19.4.1 H.2.18.2.2 H.2.18.14			N/A
6.1 VOID						N/A
6.2 VOID						N/A
6.3 Timing	Wrong point in time	Time-slot monitoring, or scheduled transmission Time-slot and logical monitoring, or comparison of redundant communication channels by either: - reciprocal comparison - independent hardware comparator	H.2.18.10.4 H.2.18.18 H.2.18.10.3 H.2.18.15 H.2.18.3			N/A
	Wrong sequence	Logical monitoring, or time-slot monitoring, or Scheduled transmission	H.2.18.10.2 H.2.18.10.4 H.2.18.18			
7 Input/output periphery	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			N/A
7.1 VOID						N/A
7.2 Analog I/O 7.2.1 A/D and D/A-converter	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			N/A
7.2.2 Analog multiplexer	Wrong addressing	Plausibility check	H.2.18.13			N/A
8 VOID						N/A

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Clause	Requirement + Test	Result - Remark	Verdict

9 Custom chips [d] e.g. ASIC, GAL, gate array	Any output outside the static and dynamic functional specification	Periodic self-test	H.2.16.6			N/A
NOTE A Stuck-at fault model denotes a fault model representing an open circuit or a non-varying signal level. A DC fault model denotes a stuck-at fault model incorporating short circuit between signal lines.						
[a)] For fault/error assessment, some components are divided into their sub-functions. [b)] For each sub-function in the table, the Table R.2 measure will cover the software fault/error. [c)] Where more than one measure is given for a sub-function, these are alternatives. [d)] To be divided as necessary by the manufacturer into sub-functions. [e)] Table R.1 is applied according to the requirements of R.1 to R.2.2.9 inclusive.						

S	**ANNEX S (NORMATIVE)** **BATTERY OPERATED APPLIANCES POWERED BY BATTERIES THAT ARE NON-RECHARGEABLE OR NOT RECHARGED IN THE APPLIANCE**		**--**
	The following modifications to this standard are applicable for battery-operated appliances where the batteries are either non-rechargeable (primary batteries), or		N/A
	rechargeable batteries (secondary batteries) that are not recharged in the appliance		N/A
5.8.1	If the supply terminals for the connection of the battery have no indication of polarity, the more unfavourable polarity is applied		N/A
5.S.101	Appliances intended for use with a battery box are tested with the battery box supplied with the appliance or with the battery box recommended in the instructions		N/A
5.S.102	Appliances are tested as motor-operated appliances.		N/A
7.1	Appliances marked with the battery voltage (V) and the polarity of the terminals, unless.....:		N/A
	the polarity is irrelevant		N/A
	Appliances also marked with:		--
	- name, trade mark or identification mark of the manufacturer or responsible vendor .....:		N/A
	- model or type reference .....:		N/A
	- IP number according to degree of protection against ingress of water, other than IPX0 .....:		N/A
	- type reference of battery or batteries .....:		N/A
	If relevant, the positive terminal is indicated by the symbol IEC 60417-5005 and the negative terminal by the symbol IEC 60417-5006		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	If appliances use more than one battery, they are marked to indicate correct polarity connection of the batteries		N/A
7.6	Additional symbols		N/A
7.12	The instructions contain the following, as applicable:		--
	- the types of batteries that may be used .....:		N/A
	- how to remove and insert the batteries		N/A
	- non-rechargeable batteries are not to be recharged		N/A
	- rechargeable batteries are to be removed from the appliance before being charged		N/A
	- different types of batteries or new and used batteries are not to be mixed		N/A
	- batteries are to be inserted with the correct polarity		N/A
	- exhausted batteries are to be removed from the appliance and safely disposed of		N/A
	- if the appliance is to be stored unused for a long period, the batteries are removed		N/A
	- the supply terminals are not to be short-circuited		N/A
11.5	Appliances are supplied with the most unfavourable supply voltage between		--
	- 0,55 and 1,0 times the battery voltage, if the appliance can be used with non-rechargeable batteries		N/A
	- 0,75 and 1,0 times battery voltage, if the appliance is designed for use with rechargeable batteries only		N/A
	The values specified in Table S.101 for the internal resistance per cell of the battery is taken into account		N/A
19.1	The tests are carried out with the battery fully charged unless otherwise specified		N/A
19.13	The battery does not rupture or ignite		N/A
19.S.101	Appliances are supplied with the voltage specified in 11.5. The supply terminals having an indication of polarity are connected to the opposite polarity, unless		N/A
	such a connection is unlikely to occur due to the construction of the appliance		N/A
19.S.102	For appliances with provision for multiple batteries, one or more of the batteries are reversed and the appliance is operated, if reversal of batteries is allowed by the construction		N/A

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25.5	The flexible leads or flexible cord used to connect an external battery or battery box in is connected to the appliance by a type X attachment		N/A
25.13	This requirement is not applicable to the flexible leads or flexible cord connecting external batteries or a battery box with an appliance		N/A
25.S.101	Appliances have suitable means for connection of the battery. If the type of battery is marked on the appliance, the means of connection is suitable for this type of battery		N/A
26.5	Terminal devices in an appliance for the connection of the flexible leads or flexible cord connecting an external battery or battery box are so located or shielded that there is no risk of accidental connection between supply terminals		N/A
30.2.3.2	There is no battery in the area of the vertical cylinder used for the consequential needle flame test, unless		N/A
	the battery is shielded by a barrier that meets the needle flame test of annex E, or		N/A
	that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
T	**ANNEX T (NORMATIVE) UV-C RADIATION EFFECT ON NON-METALLIC MATERIALS**		**--**
	Requirements for non-metallic materials subject to direct or reflected UV-C radiation exposure and whose mechanical and electrical properties are relied upon for compliance with the		N/A
	Does not apply to glass, ceramic and similar materials		N/A
	Tested as specified in ISO 4892-1 and ISO 4892-2, with the following modifications:		--
	Modifications to ISO 4892-1:		--
5.1.6	The UV-C emitter is a low pressure mercury lamp with a quartz envelope having a continuous spectral irradiance of 10 W/m2 at 254 nm		N/A
	Subclause 5.1.6.1 and Table 1 are not applicable		N/A
5.2.4	The black-panel temperature shall be 63 °C +/- 3 °C		N/A
5.3.1	Humidification of the chamber air is specified in part 2 when necessary		N/A
9	This clause is not applicable		N/A
	Modifications to ISO 4892-2:		--
7.1	At least three test specimens are tested		N/A
	Ten samples of internal wiring is tested		N/A

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7.2	The specimens are attached to the specimen holders such that they are not subject to any stress		N/A
7.3	Apparatus prepared as specified		N/A
	The test specimens and, if used, the irradiance-measuring instrument are exposed for 1 000 h		N/A
7.4	If used, a radiometer is mounted and calibrated such that it measures the irradiance at the exposed surface of the test specimen		N/A
7.5	Material properties and test methods for parts providing mechanical support or impact resistance as specified in Table T.1		N/A
	Material properties and test method for electrical insulation of internal wiring as specified in Table T.2		N/A
8	This clause is not applicable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

10.1-1	TABLE: Power input deviation				P
Input deviation of/at:	**P rated (W)**	**P measured (W)**	**Δ P**	**Required Δ P**	**Remark**
230 V, 50 Hz	1100	1046	-5,0%	+5%, -10%	Mini
230 V, 60 Hz	1100	1069	-2,8%	+5%, -10%	
240 V, 50 Hz	--	1108	--	REF	
220 V, 60 Hz	--	1036	--	REF	
Supplementary information: --					

10.1-2	TABLE: Power input deviation				P
Input deviation of/at:	**P rated (W)**	**P measured (W)**	**Δ P**	**Required Δ P**	**Remark**
230 V, 50 Hz	1000	1010	+1,0%	+5%, -10%	Mini Lite
230 V, 50 Hz	1000	1011	+1,1%	+5%, -10%	
240 V, 50 Hz	--	1036	--	REF	
220 V, 60 Hz	--	980	--	REF	
Supplementary information: --					

10.2	TABLE: Current deviation				--
Current deviation of/at:	**I rated (A)**	**I measured (A)**	**Δ I**	**Required Δ I**	**Remark**
--	--	--	--	--	--
Supplementary information: --					

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Clause	Requirement + Test	Result - Remark	Verdict

11.8-1	**TABLE: Heating test**		P
	Test voltage (V)..... ..... :	$\sqrt{1,15}$ x 240 V=257,4 V 1062W	—
	Ambient (°C)..... :	24,5 – 22,9	—

Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Power cord	2,7	50
Motor support	10,7	Cl.30
Motor	12,2	115
Main switch / Main switch PCB	6,5	Annex H / Cl.30
LED PCB	18,3	Cl.30
LED cover	14,3	Cl.30
Internal wire to motor / heat-shrink tubing	4,0	T250-25=225 / T125-25=100
Main PCB	10,9	Cl.30
X capacitor	13,0	T110-25=85
Varistor	11,3	T85-25=60
L1	11,7	65
ion generator	9,0	REF
Internal wire to heater	10,6	T200-25=175
Plastic supported heater / Plastic supported Main PCB (black)	42,3	Cl.30
Plastic enclosure inside near heater (White)	40,1	Cl.30
Plastic enclosure inside near heater (gray)	57,2	Cl.30
Thermostat/ Mica	53,5	REF/ 400
Thermal link	55,6	REF
NTC/ Air outlet	90,6	REF
Switch holder	2,6	Cl 30
Accessible surface (table Z101)		
Switch holder	2,6	50
surface of the enclosure surrounding the heating element plus 50 mm	5,9	65
Handle	3,5	65
Supplementary information: with accessory.		

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Clause	Requirement + Test	Result - Remark	Verdict

11.8-2	**TABLE: Heating test**		P
	Test voltage (V) ..... :	$\sqrt{1,15}$ x 220 V=235,9 V 1050W	—
	Ambient (°C) ..... :	22,4 - 20,8	—

Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Power cord	3,0	50
Motor support	9,8	Cl.30
Motor	11,0	Class F/ 115
Main switch / Main switch PCB	5,6	Annex H / Cl.30
LED PCB	17,4	Cl.30
LED cover	13,5	Cl.30
Internal wire to motor / heat-shrink tubing	4,0	T250-25=225 / T125-25=100
Main PCB	12,2	Cl.30
X capacitor	12,8	T110-25=85
Varistor	11,2	T85-25=60
L1	11,1	65
ion generator	8,5	REF
Internal wire to heater	10,1	T200-25=175
Plastic supported heater / Plastic supported Main PCB (black)	41,7	Cl.30
Plastic enclosure inside near heater (White)	38,38	Cl.30
Plastic enclosure inside near heater (gray)	52,9	Cl.30
Thermostat/ Mica	57,5	REF/ 400
Thermal link	59,5	REF
NTC/ Air outlet	85,6	REF
Switch holder	2,5	Cl 30
Accessible surface (table Z101)		
Switch holder	2,5	50
surface of the enclosure surrounding the heating element plus 50 mm	5,8	65
Handle	2,7	65
Supplementary information: with accessory.		

11.8	**TABLE: Heating test, resistance method**		--
	Test voltage (V) ..... :	--	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Ambient, t1 (°C)..... :			**--**		—
	Ambient, t2 (°C)..... :			**--**		—
Temperature rise of winding:	R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class	
--	**--**	**--**	**--**	**--**	**--**	
Supplementary information: --						

13.2	**TABLE: Leakage current**			P
	Heating appliances: 1,15 x rated input (W) .. :	--		—
	Motor-operated and combined appliances: 1,06 x rated voltage (V)..... :	1,06 X 240 = 254,4		—
Leakage current between:		**I (mA)**	**Max. allowed I (mA)**	
L/N – Enclosure/ heating surface (with metal foil)		Max: 0,020	0,35 peak	
Supplementary information: --				

13.3	**TABLE: Dielectric strength**		P
Test voltage applied between:		**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**
Parts isolated with basic insulation		1000	No
Parts isolated with supplementary insulation		1750	No
Parts isolated with reinforced insulation		3000	No
Supplementary information: --			

14	**TABLE: Transient overvoltages**					N/A
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**			P
	Single phase appliances: 1,06 x rated voltage (V) .....:	1,06 x 240V=254,4V		—
	Three phase appliances 1,06 x rated voltage divided by √3 (V) .....:	--		—
Leakage current between:		**I (mA)**	**Max. allowed I (mA)**	
Live part and accessible plastic enclosure/ knob		0,022	0,25	
Supplementary information: --				

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Clause	Requirement + Test	Result - Remark	Verdict

16.3	TABLE: Dielectric strength		P
Test voltage applied between:		**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**
Parts isolated with basic insulation		1250	No
Parts isolated with supplementary insulation		1750	No
Parts isolated with reinforced insulation		3000	No
Supplementary information: --			

17	TABLE: Overload protection		N/A
Thermocouple locations:		**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (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)**	**Δ T (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?			Yes	--			
Are there "off" or "stand-by" position?			Yes	Off			
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**
19.2-1	Motor on, 0,85 x $(220/230)^2$ x 1100 W = 855,5 W	Until steady condition establishes, no hazard.	NTC operated.	Yes	N/A	NTC disabled.	Steady condition establishes, no hazard.

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Clause	Requirement + Test	Result - Remark	Verdict

19.2-2	Motor off, 0,85 x $(220/230)^2$ x 1100 W = 855,5 W	Disable thermal cut-out, Thermal link operated, no hazard.	NTC operated	Yes	N/A	NTC disabled.	Thermal link operated, no hazards
19.3-1	Motor on, 1,24 x $(240/230)^2$ x 1100 W = 1485,2 W	Until steady condition establishes, no hazard.	NTC operated	Yes	N/A	NTC disabled.	Steady condition establishes, no hazard.
19.3-2	Motor off, 1,24 x $(240/230)^2$ x 1100 W = 1485,2 W	Disable thermal cut-out, Thermal link operated, no hazard.	NTC operated	Yes	N/A	NTC disabled.	Thermal link operated, no hazards
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	Appliance was operated with fan motor stalled (30S)	Disable thermal cut-out, Thermal link operated, no hazard.	NTC operated	Yes	N/A	NTC disabled.	Thermal link operated, no hazards
19.8	Appliance was operated with fan motor stalled (30S)	Disable thermal cut-out, Thermal link operated, no hazard.	NTC operated	Yes	N/A	NTC disabled.	Thermal link operated, no hazards
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	See claue.19.11.	See claue.19.11.	N/A	N/A	N/A	N/A	P
19.11.4.8	See cl 19.11.4.8	See cl 19.11.4.8	N/A	N/A	N/A	N/A	P
19.101	1,15 x $(240/230)^2$ x 1100 W = 1377,4 W	No hazards	NTC operated	Yes	N/A	NTC disabled.	Steady condition establishes, no hazard.
19.102	1,15 x $(240/230)^2$ x 1100 W = 1377,4 W	No hazards	NTC operated	Yes	N/A	NTC disabled.	Steady condition establishes, no hazard.
Supplementary information: --							

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Clause	Requirement + Test	Result - Remark	Verdict

19.7-1	**TABLE: Abnormal operation, locked rotor/moving parts**					P
	Test voltage (V) ..... :		240V / 50Hz			—
	Ambient, t1 (°C) ..... :		--			—
	Ambient, t2 (°C) ..... :		--			—
Temperature of winding:	**R1 (Ω)**	**R2 (Ω)**	**Δ T (K)**	**T (°C)**	**Max. T (°C)**	
--	--	--	--	--	--	
Supplementary information: Thermal link is operated in 18 second when the motor is locked, there is no obvious temperature rise.						

19.7-2	**TABLE: Abnormal operation, locked rotor/moving parts**					P
	Test voltage (V) ..... :		220V / 60Hz			—
	Ambient, t1 (°C) ..... :		--			—
	Ambient, t2 (°C) ..... :		--			—
Temperature of winding:	**R1 (Ω)**	**R2 (Ω)**	**Δ T (K)**	**T (°C)**	**Max. T (°C)**	
--	--	--	--	--	--	
Supplementary information: Thermal link is operated in 18 seconds when the motor is locked, there is no obvious temperature rise.						

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)**	**Δ T (K)**	**T (°C)**	**Max. T (°C)**	
--	--	--	--	--	--	
Supplementary information: --						

19.13-1	**TABLE: Abnormal operation, temperature rises**				P
Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**				**Max. temperature rise limit, Δ T (K)**
	19.2-1	**19.2-2**	**19.3-1**	**19.3-2**	
Test floor	28,0	10,8	44,9	19,1	150
Insulation of the supply cord	24,0	4,5	2,6	7,0	150
Supplementary information: placed on test floor with accessory. For clause 19.2-2: Thermal link is operated in 19 seconds when the motor is disconnected, there is no obvious temperature rise. For clause 19.3-2: Thermal link is operated in 14 seconds when the motor is disconnected, there is no obvious temperature rise.					

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Clause	Requirement + Test	Result - Remark	Verdict

19.13-2	TABLE: Abnormal operation, temperature rises				P
Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**				**Max. temperature rise limit, Δ T (K)**
	19.2-1	**19.2-2**	**19.3-1**	**19.3-2**	
Test floor	22,3	10,9	32,5	23,5	150
Insulation of the supply cord	3,4	4,6	2,0	6,6	150
Supplementary information: placed on a piece of low density glass-fibre insulation with accessory. For clause 19.2-2: Thermal link is operated in 18 seconds when the motor is disconnected, there is no obvious temperature rise. For clause 19.3-2: Thermal link is operated in 13 seconds when the motor is disconnected, there is no obvious temperature rise.					

19.13-3	TABLE: Abnormal operation, temperature rises			P
Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**			**Max. temperature rise limit, Δ T (K)**
	19.7-1	**19.7-2**	**19.8**	
Test floor	6,7	9,3	13,0	150
Insulation of the supply cord	4,5	3,3	5,3	150
Winding of motor	12,2	12,1	22,2	240
Supplementary information: placed on test floor with accessory. For clause 19.7-1: Thermal link is operated in 18 seconds when the motor is locked. For clause 19.7-2: Thermal link is operated in 18 seconds when the motor is locked. For clause 19.8: Thermal link is operated in 60 seconds when the motor is disconnected.				

19.101	TABLE: Abnormal operation, temperature rises	P
Thermocouple locations:	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Power cord	11,2	150
Supplementary information: test with accessory. Each setting was conducted, and the most unfavourable result was recorded.		

19.102	TABLE: Abnormal operation, temperature rises	P
Thermocouple locations	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
a) Vertical		
Power cord	14,6	150
b) Horizontal		
Power cord	14,5	150

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information: test with accessory.

21.1	TABLE: Impact resistance			P
Impacts per surface	**Surface tested**	**Impact energy (Nm)**	**Comments**	
Three	Plastic enclosure	0,5	No damaged	
Three	Air outlet	0,5	No damaged	
Three	Air inlet	0,5	No damaged	
Three	Switch	0,5	No damaged	
Three	Handle	0,5	No damaged	
Supplementary information: --				

24.1	TABLE: Critical components information				P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity 1)**
Plug	Lian Dung Electric Wire Material Co., Ltd	LT-332	250 V~, 16 A	DIN VDE 0620-2-1	VDE* (40014933)
(Alternative)	Kenic Electric Mfg. Co., Ltd.	KE-25	250 V~, 16 A	DIN VDE 0620-2-1	VDE* (40001713)
BS Plug (Fitted with an appropriate size fuse link)	Dongguan Lian Dung Electric Wire Material Co., Ltd	LT-328	250 V~	BS 1363-1	BSI* (KM 68559)
(Alternative)	Kenic Electric Mfg. Co., Ltd.	KE-328	250 V~	BS 1363-1	BSI* (KM 54019)
SASO Plug	Dongguan Lian Dung Electric Wire Material Co., Ltd	LT-328	250 V~, 13A	SASO 2203	Intertek*
Plug for Korea	Hangzhou Leadership Electric Component Co., Ltd	LT-429	250 V~, 10 A	KC60884-1 KSC8305	KC* (SU04036-16001)
(Alternative)	Kenic Electric Mfg. Co., Ltd.	KE-82	250 V~, 16 A	KC60884-1 KSC8305	KC* (SU04012-1004D)
Plug for Australia	Lian Dung Electric Wire Material Company Ltd	LT-422	250 V~, 10 A	AS/NZS 3112	NSW* (NSW25509)
(Alternative)	Kenic Electric Mfg. Co., Ltd.	KE- 12C	250 V~, 10 A	AS/NZS 3112	NSW* (NSW18070)
Supply cord	I-Sheng Electric	H05VV-F	2 x 0,75 mm^2	DIN EN 50525-2-	VDE*

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Clause	Requirement + Test	Result - Remark	Verdict

	Wire & Cable Co., Ltd.			11	(40006070)
(Alternative)	Kenic Electric Mfg. Co., Ltd.	H05VV-F	2 x 0,75 mm^2	DIN EN 50525-2-11	VDE* (103853)
Supply cord for Korea	I-Sheng Manufacturing (Songgang) Factory	H05VV-F	2 x 0,75 mm^2	KC60227-1 KC60227-2 KC60227-5	KC* (SU01015-4001)
(Alternative)	Kenic Electric Mfg. Co., Ltd.	H05VV-F	2 x 0,75 mm^2	KC60227-1 KC60227-2 KC60227-5	KC* (SU01008-4002A)
Supply cord for Australia	I-Sheng Electric Wire & Cable Co., Ltd.	H05VV-F	2 x 0,75 mm^2	AS/NZS 60227.5	SAA* (SAA-190401-EA)
(Alternative)	Kenic Electric Mfg. Co., Ltd.	H05VV-F	2 x 0,75 mm^2	AS/NZS 60227.5	NSW* (NSW15075)
Heating element	Dongguang Jingxin Hongyu Technology Co.，Ltd	0Cr25AL5	Ø55.8±0.2mm D=0.51mm SWG25 48Ω±1Ω	IEC 60335-1 IEC 60335-2- 23	Tested with appliance
Thermal link	SCHOTT Japan Corporation	SF184R0	Tf:184°C, AC250 V, 10 A/15 A	IEC 60691	VDE* (40035880)
Thermal cut out	Zhongshan Chuancheng Precision Electronics Co., Ltd	CCS9	Tf:145°C, 250 V~,12 A	IEC 60730-1 IEC 60730-2-9	TUV* (R 50279441)
X2 capacitor	Dain Electronics Co., Ltd	MPX/MEX/NPX	275 V~, X2,0,68μFK, 40/110/21/C	IEC 60384-14	VDE* (40018798)
(Alternative)	KNSCHA ELECTRONICS CO., LIMITED	MPX/MKP	275 V~ , X2, 0,68μF, 40/110/56/B	IEC 60384-14	VDE* (40045532)
Varistor	Dongguan City Dafu Electronics Co. Ltd.	10D471K/ NDF10D471K	300 V, 210 PF, T85	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE* (40050909)
(Alternative)	Hongzhi Enterprises Ltd.	HEL10D471K	272 V, 460 PF, T85	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE* (40037512)
(Alternative)	Dongguan QinHong（QNR）Electronic Technology Co.,LTD	10D471K	272 V, 460 PF, T85	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE* (40049044)
Current Fuse	Shenzhen Lanson Electronics Co.	24E	250 V~, T3,15 A	IEC 60127-1 IEC 60127-4	CB* (CN52403)

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Clause	Requirement + Test	Result - Remark	Verdict

	Ltd				
(Alternative)	Dongguan Chevron Electronic Technology Co., Ltd.	SET	250 V~, T3,15 A	IEC 60127-1 IEC 60127-4	VDE* (40049351)
(Alternative)	Dongguan Better Electronics Technology Co., Ltd.	244	250 V~, T3,15 A	IEC 60127-1 IEC 60127-4	TUV* (R 50335764)
(Alternative)	XC Electronics (Shenzhen) Corp. Ltd.	24T	250 V~, T3,15 A	IEC 60127-1 IEC 60127-4	TUV* (R 50423660)
(Alternative)	Suzhou Walter Electronic Co., Ltd.	2410LT	250 V~, T3,15 A	IEC 60127-1 IEC 60127-4	TUV* (R 50485936)
NTC	Guangdong hongzhi Electronic Technology Co., Ltd	8D- 11	Operating temperature: -40~+175 ˚C	IEC 60335-1 IEC 60335-2-23	TUV*（B 001617 0001 Rev.02）
(Alternative)	Thinking Electronic Industrial Co.,Ltd.	SCK 083	Operating temperature: -40~+175 ˚C	IEC 60335-1 IEC 60335-2-23	TUV*（R 50050155）
Internal wire (Lead to motor)	Foshan Zhengguan Fluorplastics Wire Factory	10362	24 AWG, 250°C; 600 V	IEC 60335-1 IEC 60335-2-23	UL* (E345435) Tested with appliance
Internal wire (Lead to heater)	Foshan City Zheng Guan Fluorplastics Wire Factory	1332	22AWG/24AWG, 200 °C,300V	IEC 60335-1 IEC 60335-2-23	UL* (E307535) Tested with appliance
Internal wire (Between LED PCB and main PCB)/ (Between switch PCB and main PCB)	Foshan City Zheng Guan Fluorplastics Wire Factory	1571	28AWG/30AWG,80° C,300V	IEC 60335-1 IEC 60335-2-23	UL* （E502584） Tested with appliance
(Alternative)	SHENZHEN DINGYU ELECTRICAL TECHNOLOGY CO LTD	1571	28AWG/30AWG,80° C,300V	IEC 60335-1 IEC 60335-2-23	UL* （E365423） Tested with appliance
Optocoupler	NingBo Qunxin Microelectronics Co., LTD	QX3H4B QXM3063 QXM3052	T125 Creepage distance：≥5,0mm Max. repetitive peak	DIN EN 60747-5-5	VDE* （40053982）

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Clause	Requirement + Test	Result - Remark	Verdict

			isolation voltage:600V		
(Alternative)	FUJIAN LIGHTNING OPTOELECTRONIC CO.,LTD	TD3063 TD3052 TD214A	T110 Creepage distance；≥7,6mm Max. repetitive peak isolation voltage:890V	DIN EN 60747-5-5	VDE*（40048885）
Quick connector on PCB	Dongguan Shang Tong Metal Electronics Co., Ltd.	5TS870115-BS	2,8x0,5, 0,5 mm^2	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Motor	Shenzhen Shuye Technology Co.,Ltd.	LF04	95 W, 115000 r/min, 310 VDC , Class F	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Motor winding	PACIFIC Electric Wire & Cable (shenzhen) Co., Ltd	UEWH/U@	MW 82-C Class 180	IEC 60335-1 IEC 60335-2-23	UL* (E201757) + Tested with appliance
Negative Ion Generator	Dongguan Nanbai Electronic Technology Co., Ltd	NB-LT	I/P: 100-250 VAC, 50/60Hz,1 W, O/P: -0,5kV~-4,0 kV DC	IEC 60335-2-65 IEC 60335-1 IEC 60335-2-23	TUV*（B 083210 0010 Rev.01）
Main PCB Material	KINGBOARD LAMINATES HOLDINGS LTD	KB-6160C	V-0, FR-4, Min.thickness: 1,6mm	IEC 60335-1 IEC 60335-2-23	UL* (E123995) + Tested with appliance
(Alternative)	KINGBOARD LAMINATES HOLDINGS LTD	KB-6164	V-0, FR-4, Min.thickness: 1,6mm	IEC 60335-1 IEC 60335-2-23	VDE*（40020729）
Power switch PCB	KINGBOARD LAMINATES HOLDINGS LTD	KB-6160C	V-0, FR-4, Min.thickness: 0,8mm	IEC 60335-1 IEC 60335-2-23	UL* (E123995) + Tested with appliance

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Clause	Requirement + Test	Result - Remark	Verdict

(Alternative)	KINGBOARD LAMINATES HOLDINGS LTD	KB-6164	V-0, FR-4, Min.thickness: 0,8mm	IEC 60335-1 IEC 60335-2-23	VDE*（40020729）
LED PCB material	KINGBOARD LAMINATES HOLDINGS LTD	KB-6160C	V-0, Min.thickness: 1,2mm	IEC 60335-1 IEC 60335-2-23	UL* (E123995) + Tested with appliance
(Alternative)	KINGBOARD LAMINATES HOLDINGS LTD	KB-6164	V-0,FR-4, Min.thickness: 1,2mm	IEC 60335-1 IEC 60335-2-23	VDE*（40020729）
Heat shrink tube	Dongguan Huangfeng Insulation Material Co., Ltd	HFT-02	PVC, 600V, T125	IEC 60335-1 IEC 60335-2-23	UL* (E236485) Tested with appliance
Mica support	Dongguang Jingxin Hongyu Technology Co.，Ltd	JH-8M01	Min.thickness:0,8mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Plastic enclosure（Handle）	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PA5623A.GFW0032	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
LED cover	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PC230.NRW0986-3； PC2805 LPC230.EAW3205； PC230.NRW0947-2	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Internal plastic parts of handle	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PA5623A.GFG0065(gray） PA5623A.GFL0036(blue） PA5623A.GFP0010(pink） PA5623A.GF30E0007(green）	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Enclosure for support switch	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PC230.NRG0490(gray） PC230.NRL0114(blue） PC230.NRR0117(pink） PC230.NRE0073（green）	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance

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Clause	Requirement + Test	Result - Remark	Verdict

Switch button	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PC230.NRW0986-3	Min.thickness:1,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Plastic for air Outlet	GUANGDONG POLYGRUIMER NEW MATERIAL CO.,LTD	PC+PBT 535	Min.thickness:1,5 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
(Alternative)	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PBT123.GF30 W0123	Min.thickness:1,5 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
(Alternative)	Shenzhen Gaoke Plastify Co.,Ltd	PCT GK530 NC	Min.thickness:1,5 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
(Alternative)	Shenzhen Gaoke Plastify Co.,Ltd	PA66 GK330G30	Min.thickness:1,5 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Plastic for air inlet	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PC230.SCW0995	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Plastic support the PCB	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PA5623.GFB0209	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Plastic support the heater	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PA6623.GFB0237	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Housing	Silver age Engineering Plastics (Dong Guan)CO.,LTD	PA5623A.GFW0043	Min.thickness:2,0 mm	IEC 60335-1 IEC 60335-2-23	Tested with appliance
Push-pull switch	Guangzhou Siber Electric Co., Ltd	LD-CCB-008(T)	DC 6 V, 0,3 A, 10000 cycles	IEC 61058-1 IEC 60335-1 IEC 60335-2-23	Tested with appliance
Supplementary information: [1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039. [2]) License available upon request for all the certified components.					

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

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Clause	Requirement + Test	Result - Remark	Verdict

29.1	TABLE: Clearances		P
	Overvoltage category..... ....:	II	—

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

Supplementary information:

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

Basic insulation: between Live part to internal surface;

Supplementary insulation: between internal wire and accessible plastic enclosure;

Reinforced insulation: between live part and accessible plastic enclosure.

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V):	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			Verdict
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	B**	S**	R**	
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—	—	—	N/A
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—	—	—	N/A
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—	—	N/A
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	4,0	—	—	P

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Clause	Requirement + Test	Result - Remark	Verdict

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V):	**Creepage distance (mm) Pollution degree**										
	1	**2**			**3**			**Type of insulation**			**Verdict**
		Material group			**Material group**						
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**B****	**S****	**R****	
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	—	4,2	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	**8,0**	—	—	8,8	P
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—	—	—	N/A
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—	—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—	—	—	N/A
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—	—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—	—	—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—	—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—	—	—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—	—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—	—	—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—	—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—	—	—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—	—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—	—	—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—	—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—	—	—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—	—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—	—	—	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V):	**Creepage distance (mm) Pollution degree**										
	1	**2**			**3**			**Type of insulation**			**Verdict**
		Material group			**Material group**						
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**B****	**S****	**R****	
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—	—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—	—	—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—	—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—	—	—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—	—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—	—	—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—	—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—	—	—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—	—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—	—	—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—	—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—	—	—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—	—	N/A

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

Basic insulation: between Live part to internal surface;

Supplementary insulation: between internal wire and accessible plastic enclosure;

Reinforced insulation: between live part and accessible plastic enclosure.

29.2	TABLE: Creepage distances, functional insulation			P
Working voltage (V):	**Creepage distance (mm) Pollution degree**			
	1	**2**	**3**	

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Clause	Requirement + Test	Result - Remark	Verdict

		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	Verdict / Remark
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	N/A
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	N/A
250	0,42	1,0	1,4	2,0	2,5	**2,8**	3,2	P / two terminals of the current fuse: 3,0 mm
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	N/A
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A
Supplementary information: *) Material group IIIb is allowed if the working voltage does not exceed 50 V								

30.1	TABLE: Ball Pressure Test of Thermoplastics		P
Allowed impression diameter (mm) ..... :		≤ 2,0mm	—
Object/ Part No./ Material	**Manufacturer/ trademark**	**Test temperature (°C)**	**Impression diameter (mm)**
Main switch PCB	See table 24.1	125	0,90
Main PCB	See table 24.1	125	0,92
Motor support	See table 24.1	75	1,00
Plastic supported heater / Plastic supported Main PCB (black)	See table 24.1	82,3	1,12

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

Plastic enclosure inside near heater (White)	See table 24.1	80,1	1,10
Plastic enclosure inside near heater (gray)	See table 24.1	97,2	1,20
Switch holder	See table 24.1	75	0,90
LED PCB	See table 24.1	125	0,95
LED cover	See table 24.1	75	1,08
connector	See table 24.1	125	1,10
Supplementary information: --			

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

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**		
Main switch PCB	See table 24.1	NI	--	--	--	--	--	P
Main PCB	See table 24.1	NI	--	--	--	--	--	P
Motor support	See table 24.1	NI	--	--	--	--	--	P
Plastic supported heater / Plastic supported Main PCB (black)	See table 24.1	NI	--	--	--	--	--	P
Plastic enclosure inside near heater (White)	See table 24.1	NI	--	--	--	--	--	P
Plastic enclosure inside near heater (gray)	See table 24.1	NI	--	--	--	--	--	P
Switch holder	See table 24.1	NI	--	--	--	--	--	P
LED PCB	See table 24.1	NI	--	--	--	--	--	P
LED cover	See table 24.1	NI	--	--	--	--	--	P
connector	See table 24.1	NI	--	--	--	--	--	P
X capacitor	See table 24.1	NI	--	--	--	--	--	P
Negative Ion Generator	See table 24.1	NI	--	--	--	--	--	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)..... :								N/A
The test specimen passed the test by virtue of most of the flaming material being withdrawn with the glow-wire (Yes/No)? ..... :								No

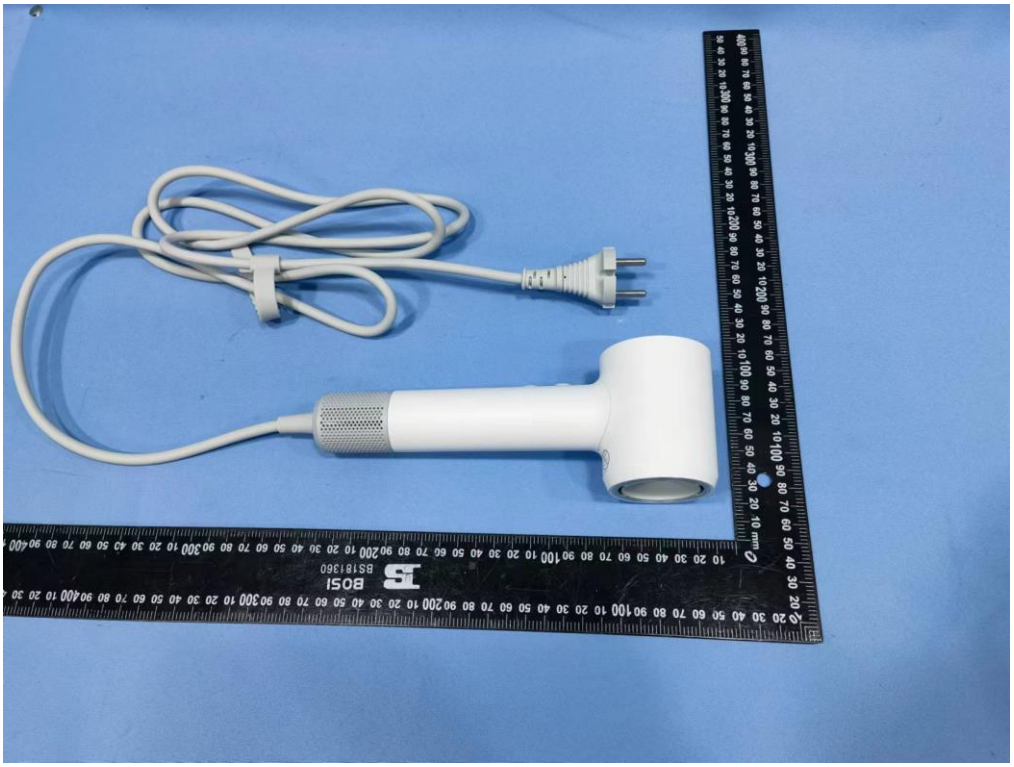
IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict

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 NI=no ignition.	

30.2/30.2.4	**TABLE: Needle- flame test (NFT)**				N/A
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					

Photo document

Overall view for model Mini Lite:



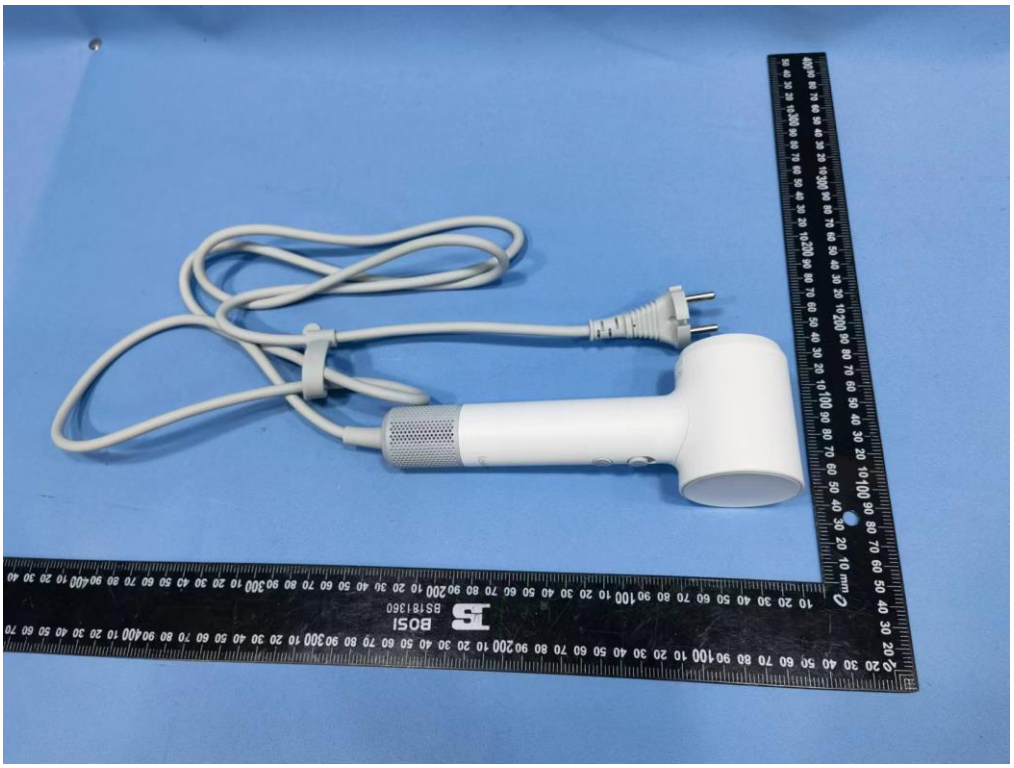
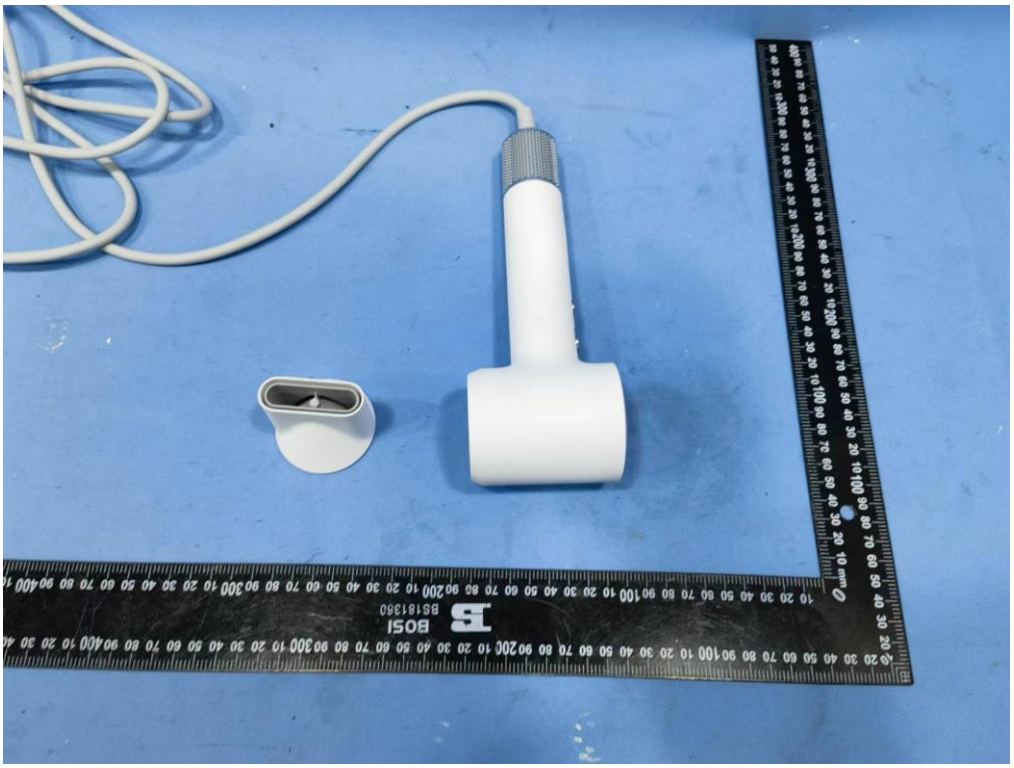


Photo document

Overall view for model Mini:

Photo document

Assembly accessory view:



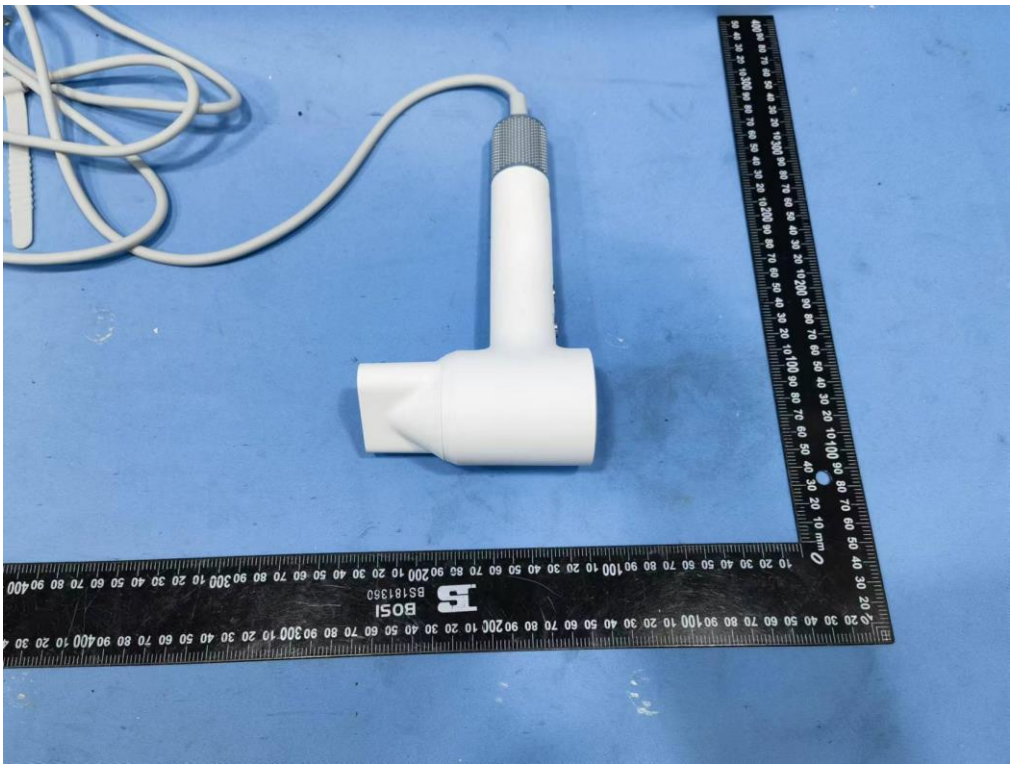
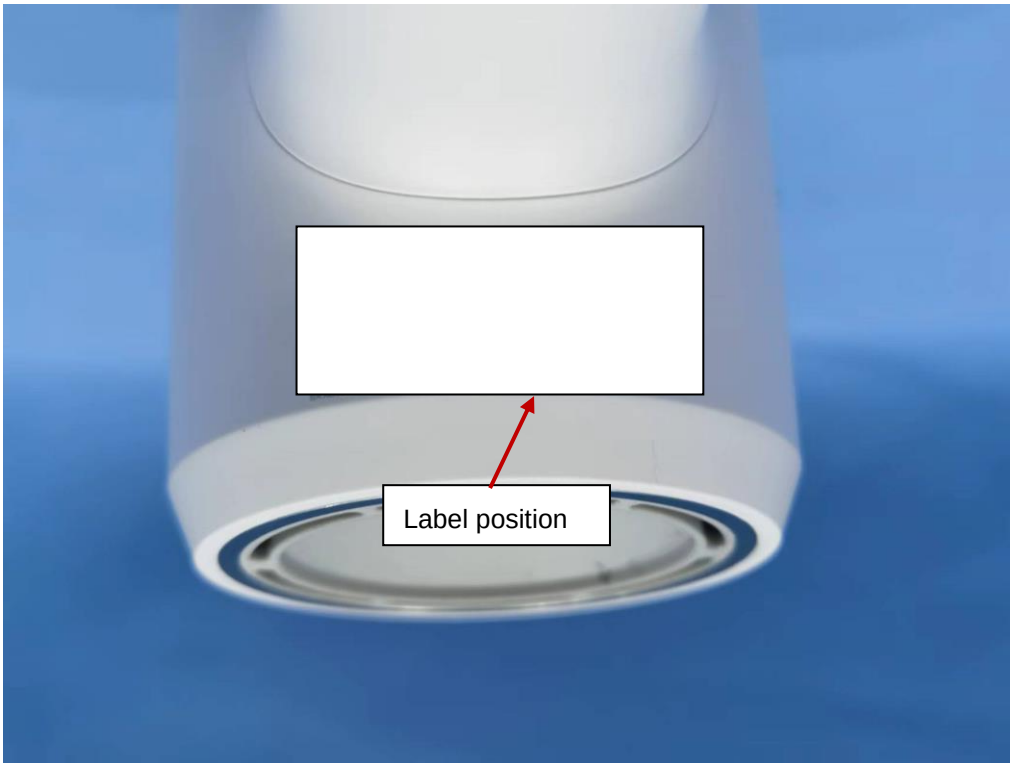


Photo document

Accessory view:

Photo document

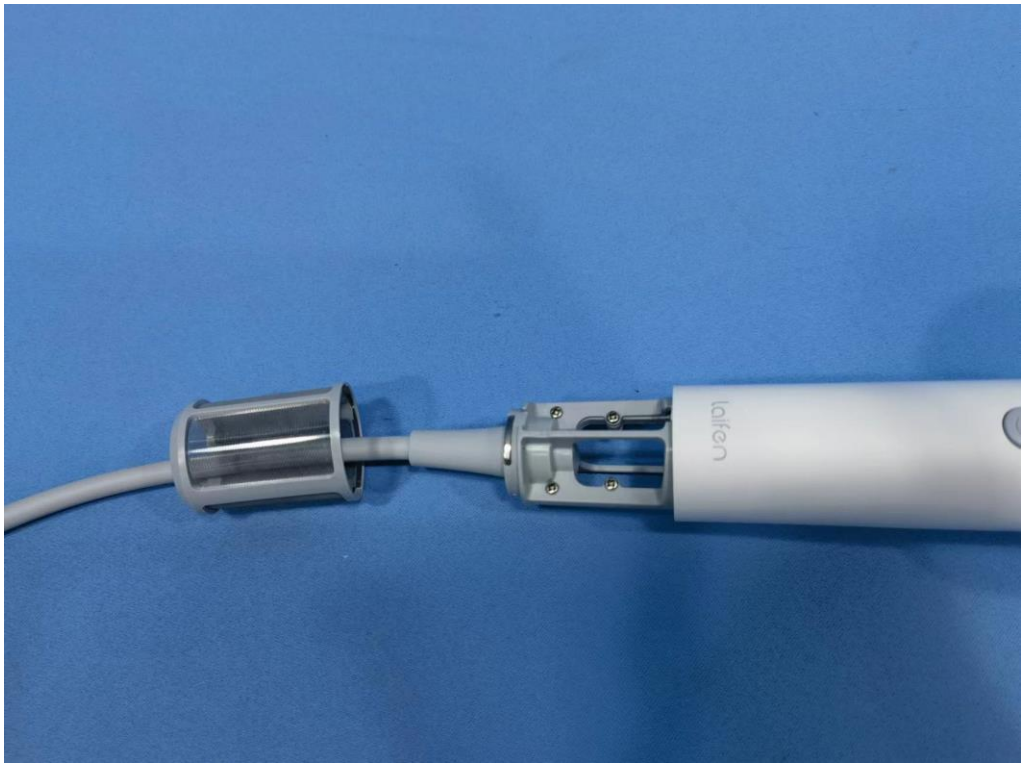


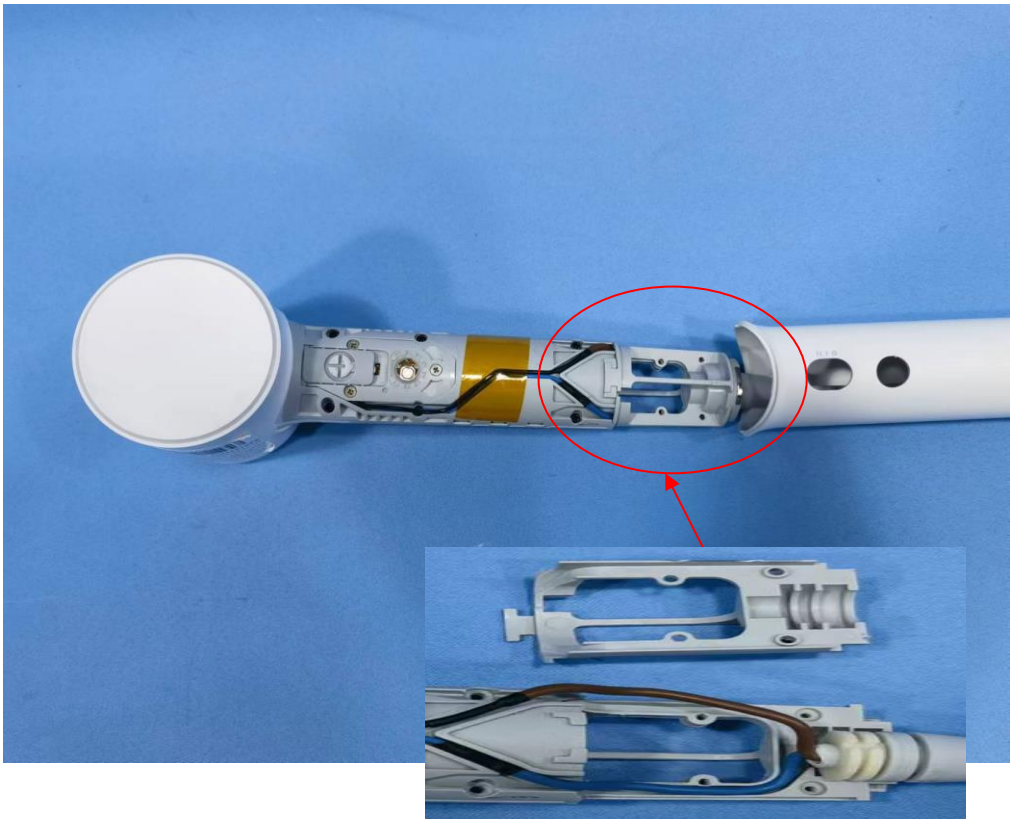
Main switch view:

Photo document

Construction view:

Photo document





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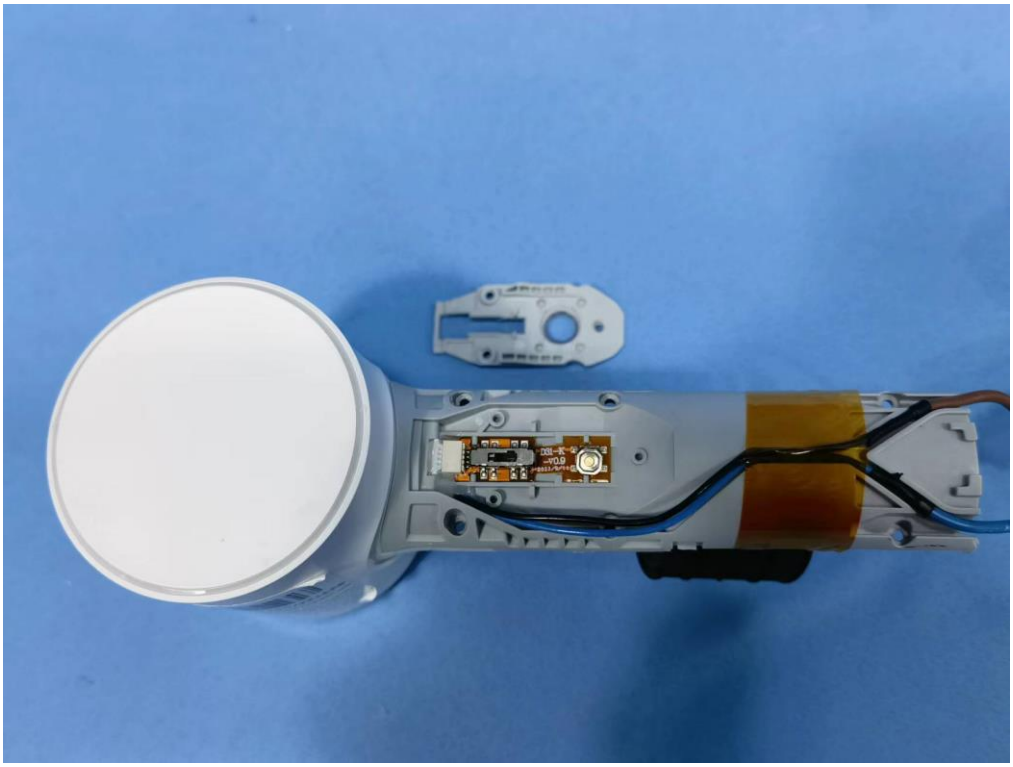
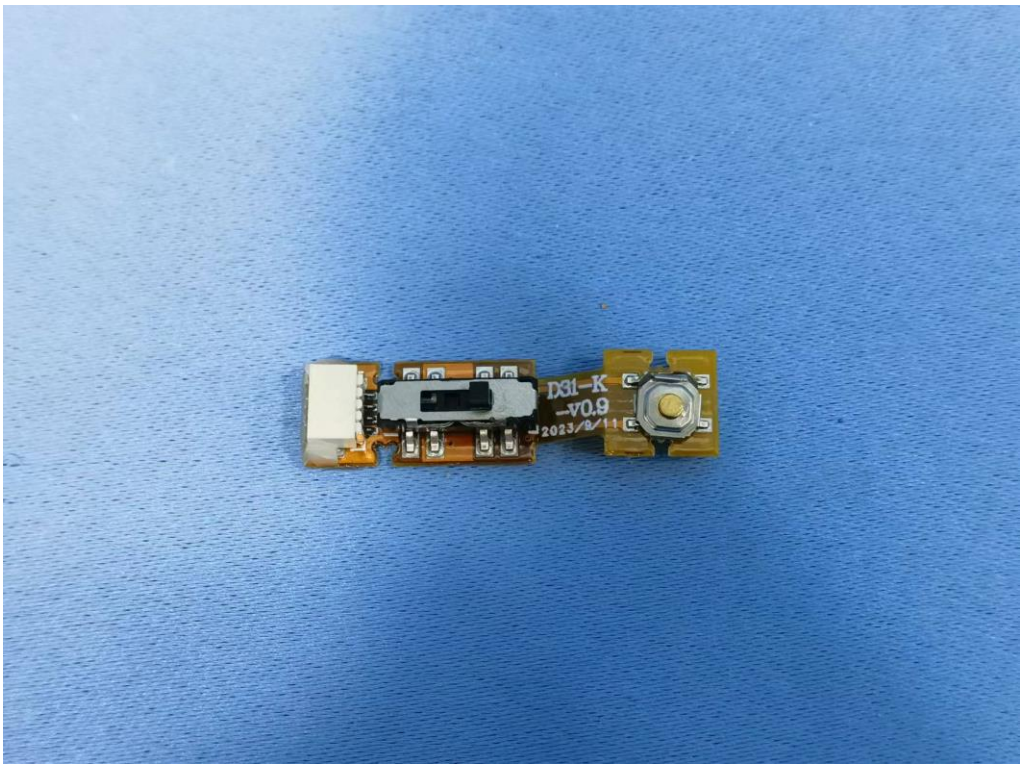


Switch PCB view:



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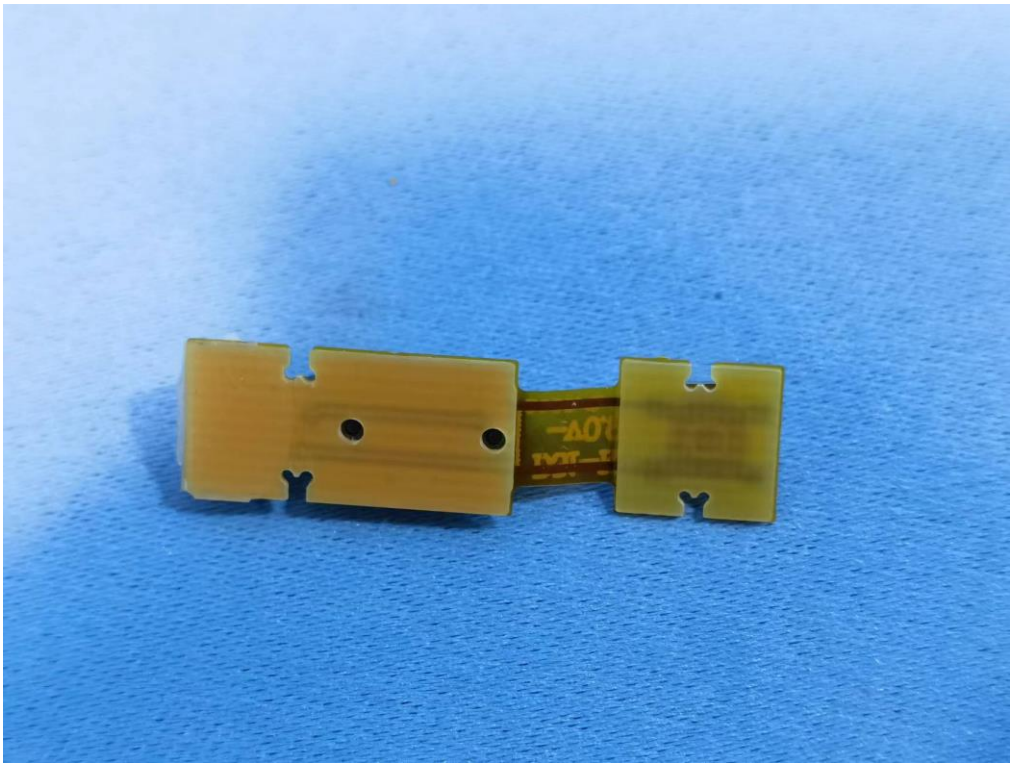
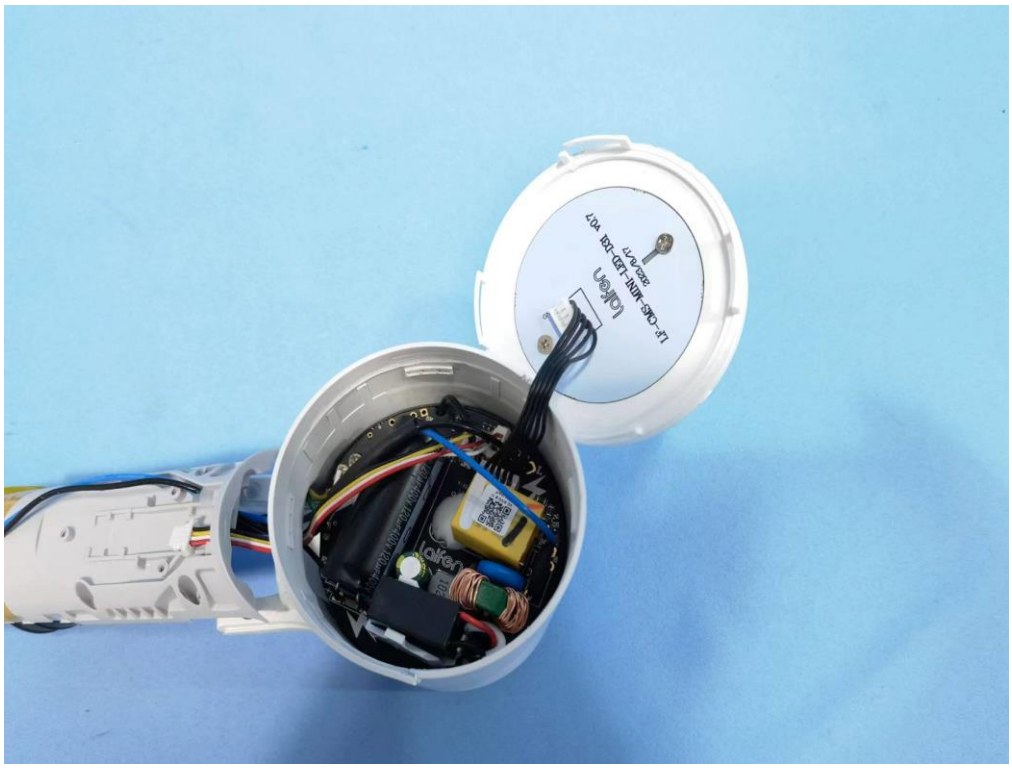


Internal view:



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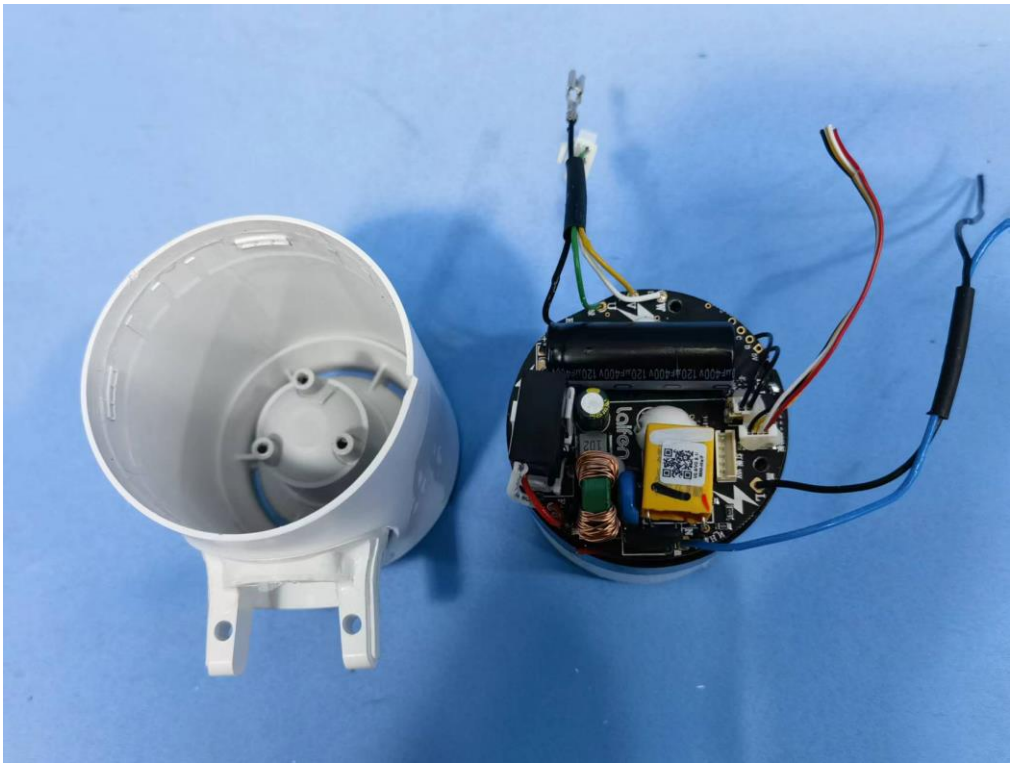
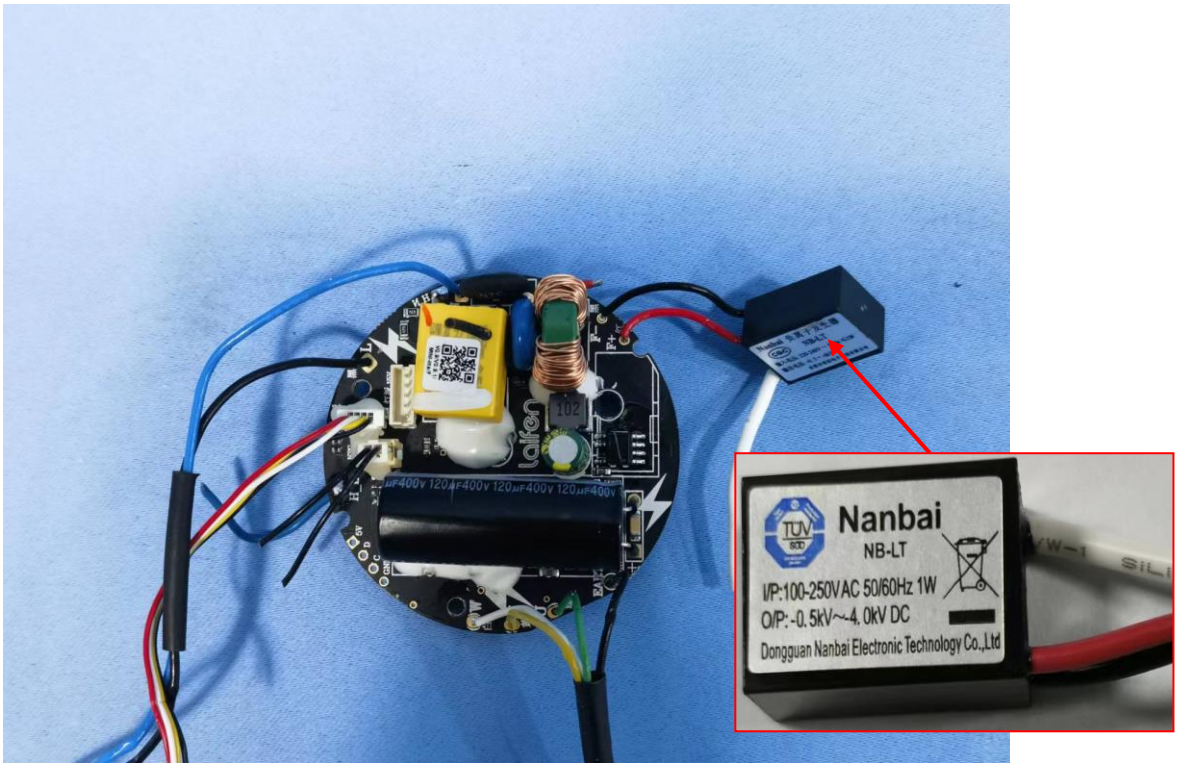


Main PCB view:



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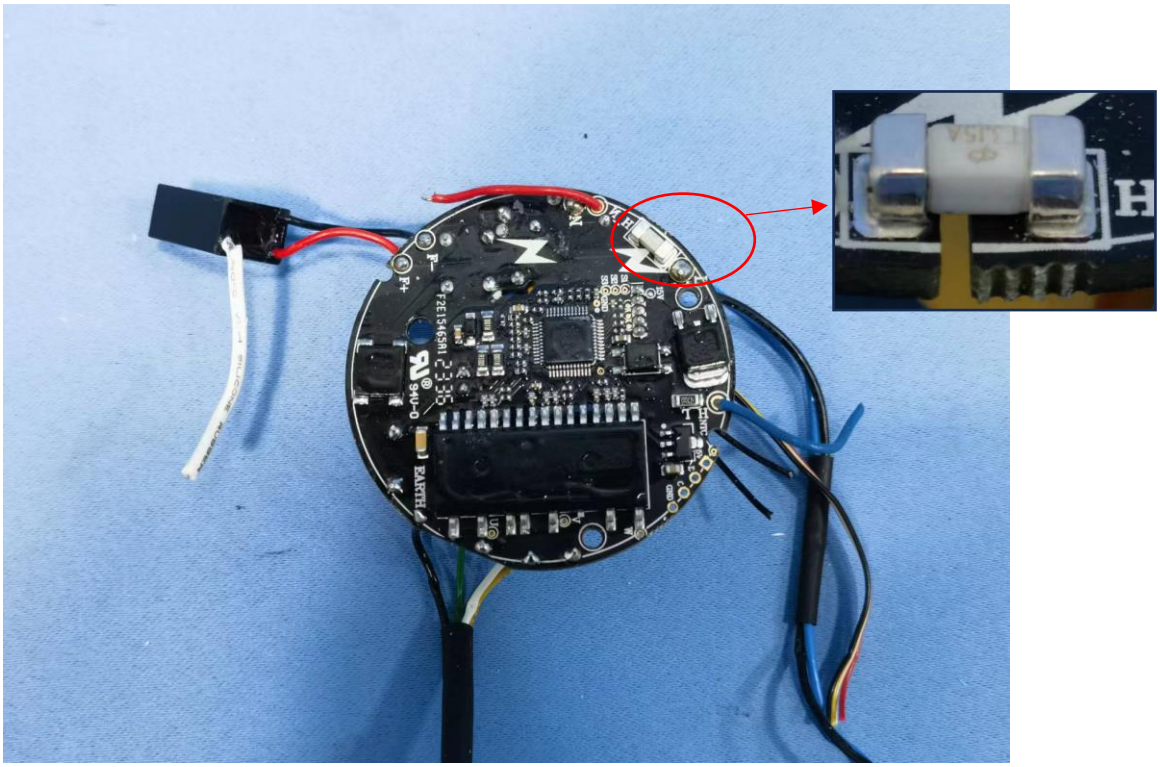


LED PCB view:

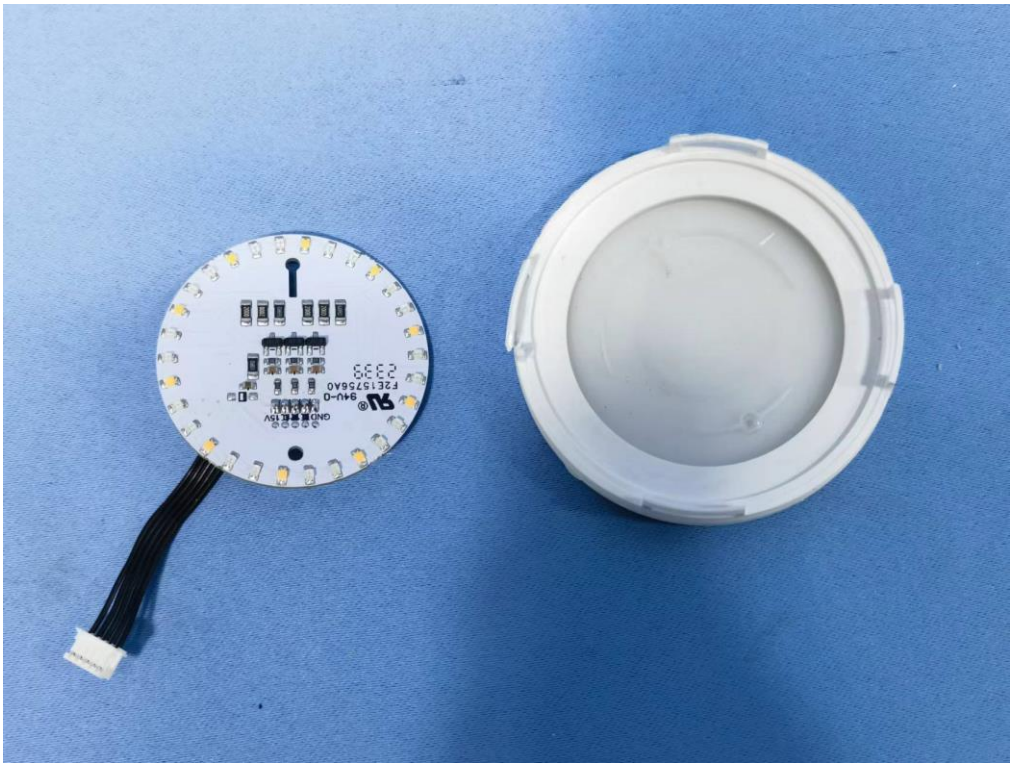


Photo document

Internal view:

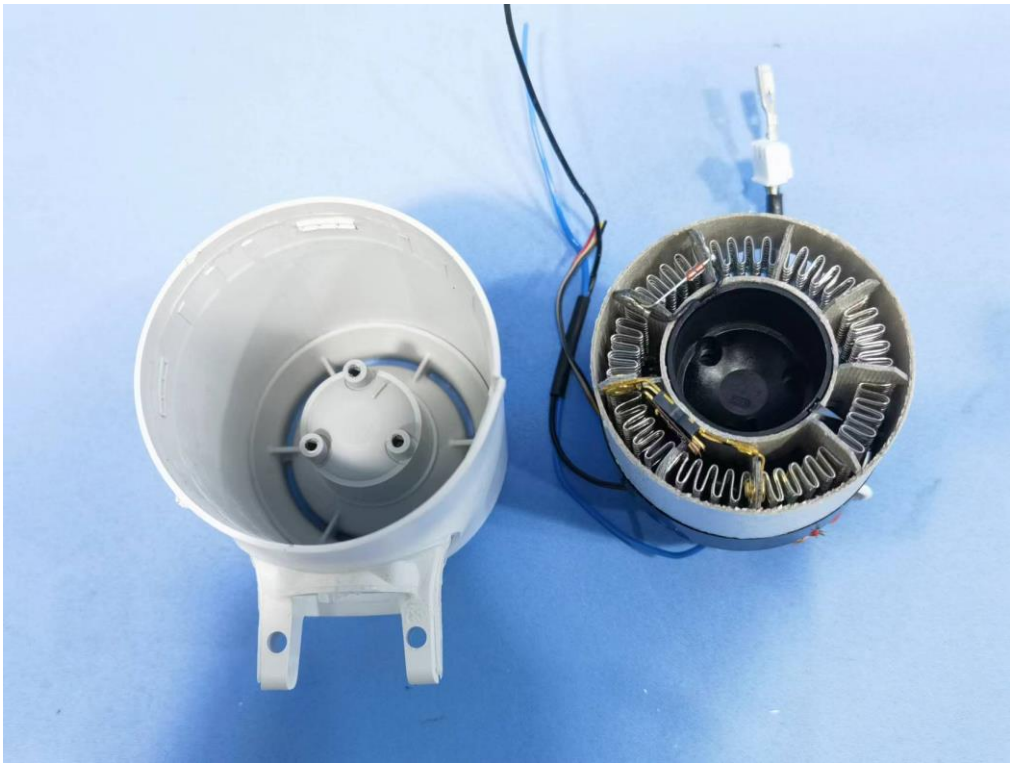


Photo document

NTC and thermostat view:

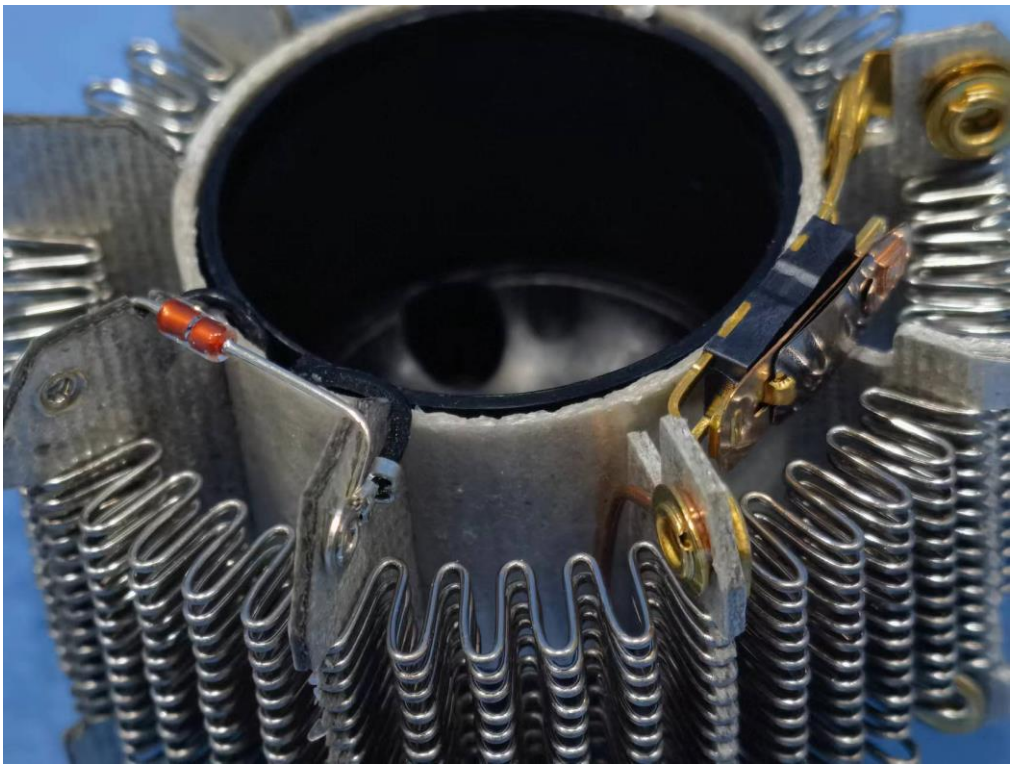
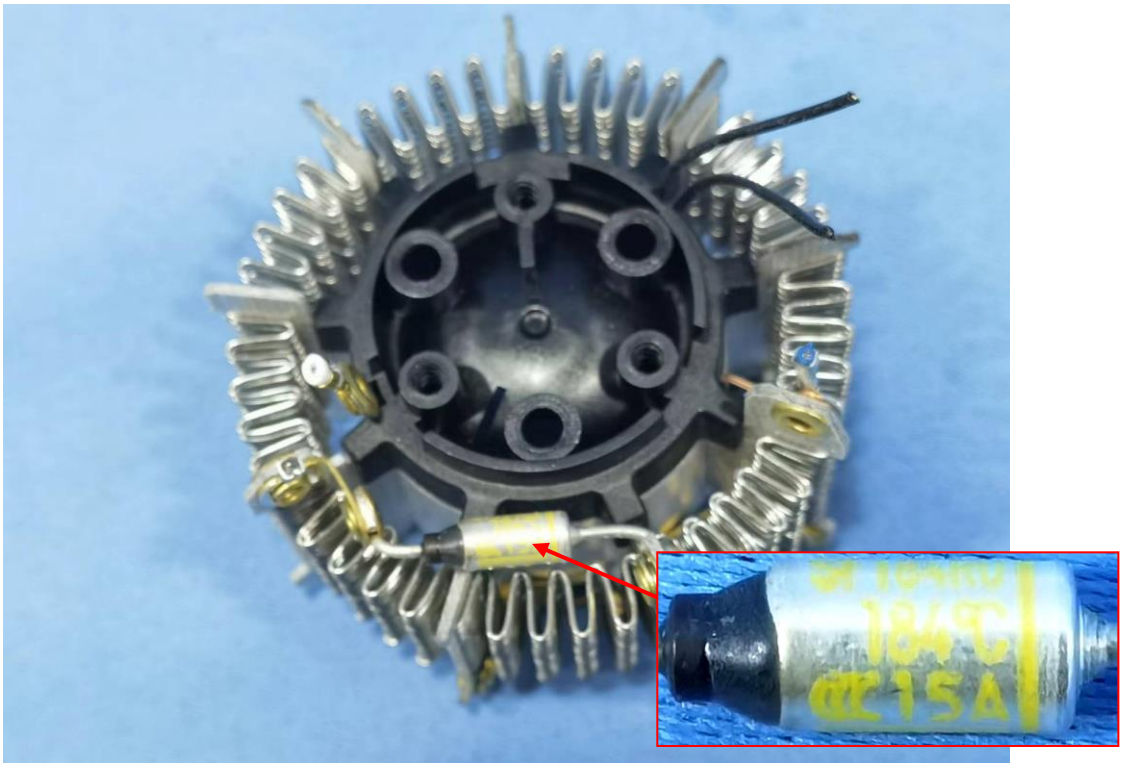
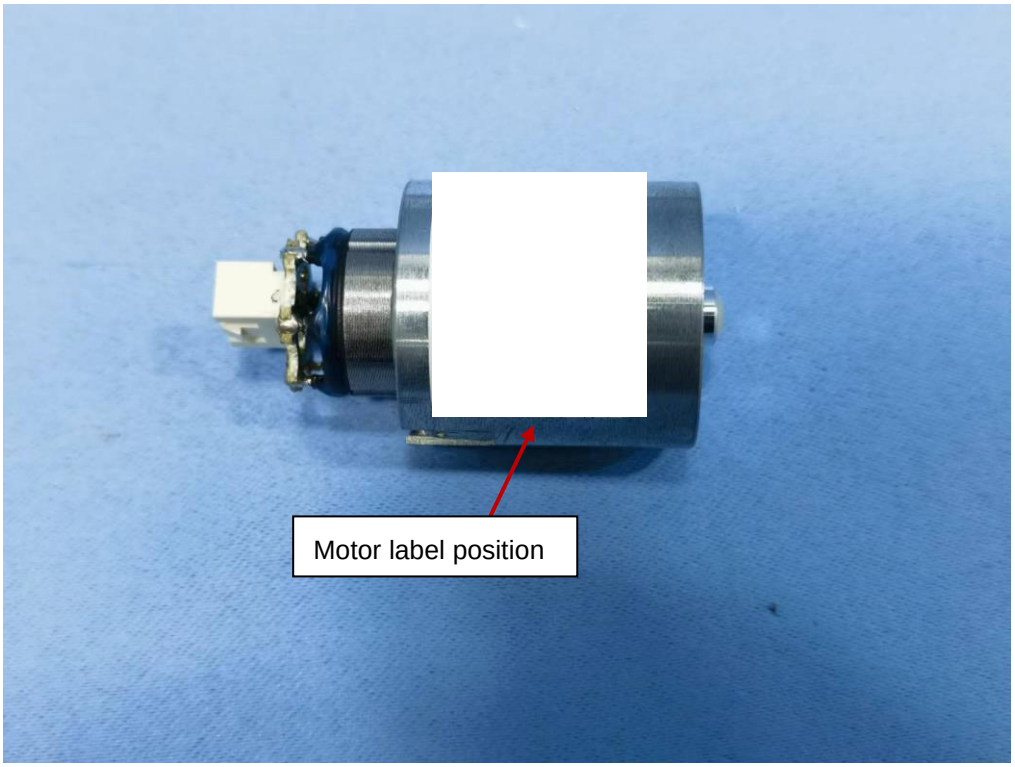


Photo document

Thermal link View:



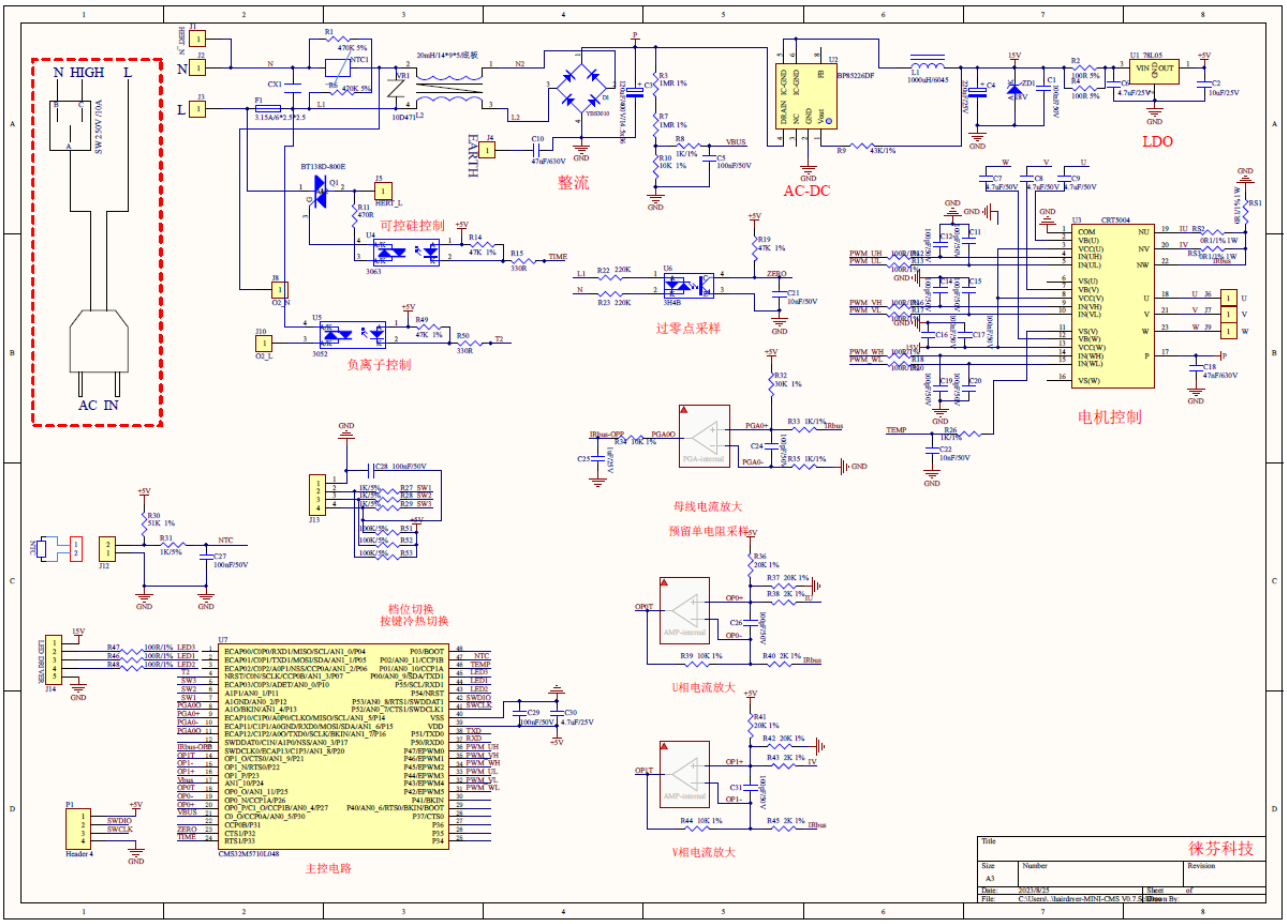
Motor view:



Circuit diagram

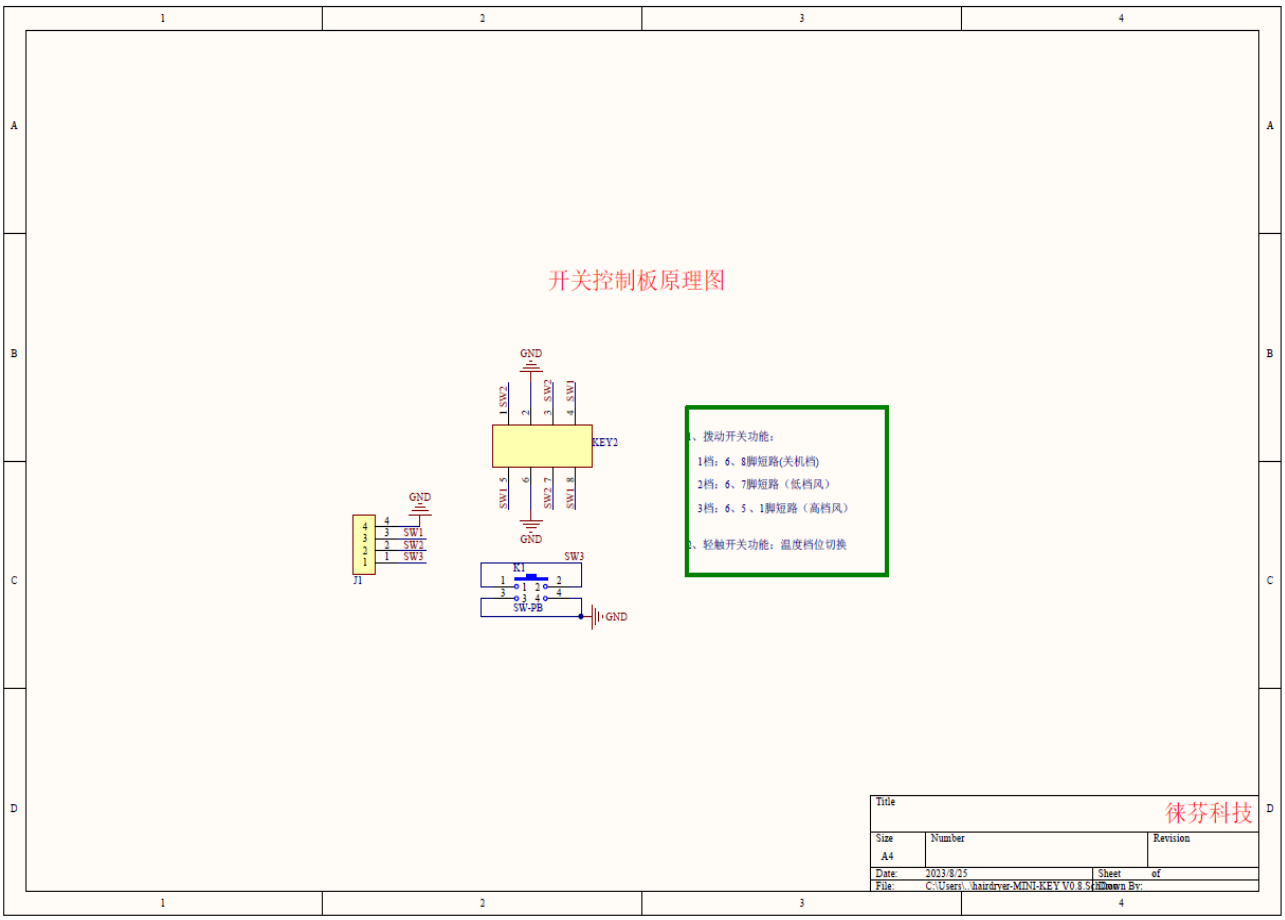
Main PCB:

220-240V, 50-60Hz



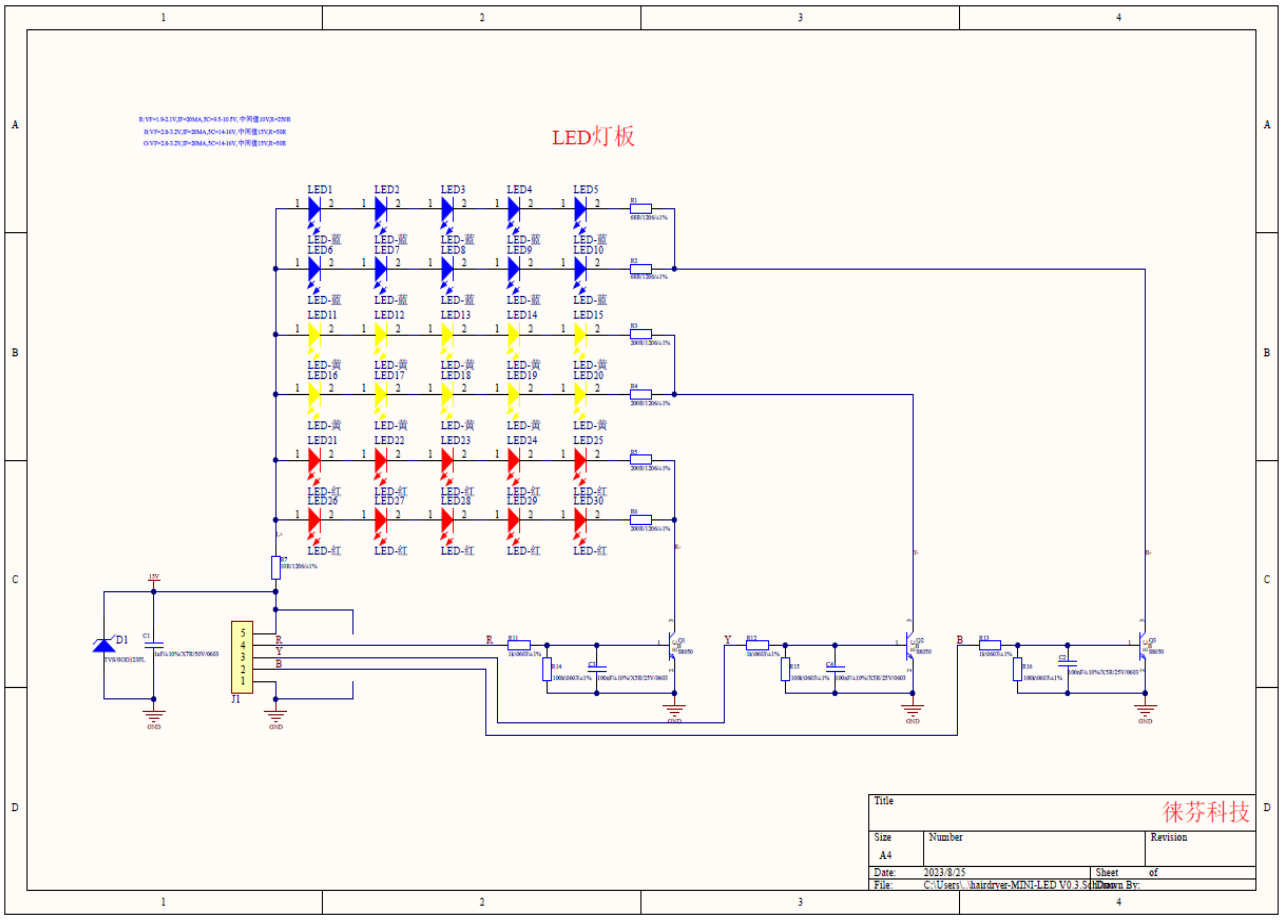
Circuit diagram

Control PCB:



Circuit diagram

LED PCB:



IEC 60335-2-23-ATTACHEMENT			
Clause	Requirement + Test	Result - Remark	Verdict

	IEC 60335-2-65:2002 + A1: 2008 + A2:2015 (applicable parts: clause 32)		--
	The ozone concentration produced by ionozation is not excessive and shall not exceed 5 x 10^{-8} (IEC 60335-2-65)	2,7 x 10^{-9}	P

Report No.: 231227047GZU-001

IEC60335_2_23L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 60335-2-23** **(AUSTRALIA/NEW ZEALAND) NATIONAL DIFFERENCES** (Household and similar electrical appliances – Safety – Part 2-23: Particular requirements for appliances for skin or hair care)			
Differences according to.....:	AS/NZS 60335.2.23:2017 + A1:2020 +A2:2021 AS/NZS 60335.1:2020+A1:2021		
TRF template used: ..... :	IECEE OD-2020-F3:2022, Ed. 1.2		
Attachment Form No. .....:	AU_NZ_ND_IEC60335_2_23L		
Attachment Originator.....:	NZ Electrotechnical Committee/Standards New Zealand		
Master Attachment .....:	Date 2023-10-31		
	National Differences		--
3	**TERMS AND DEFINITIONS**		--
	Insert the following definition:		--
AZ.3.1.201	Outlet load (AS/NZS 60335.1:2020)		N/A
	maximum allowed load that may be connected to appliance outlets and socket outlets accessible to the user (AS/NZS 60335.1:2020)		N/A
	Note to entry 1 A USB outlet is not considered to be an appliance outlet (AS/NZS 60335.1:2020)		N/A
5	**GENERAL CONDITIONS FOR THE TESTS**		--
5.2	Insert the following variation:		--
	If the tests of AZ.22.201 need to be performed they are carried out on separate appliances, the number of appliances is that required by AS/NZS 3112. (AS/NZS 60335.1:2020)		N/A
5.8.1	Replace the test condition by the following variation:		--
	Appliances for a.c. only are tested with a.c. at 50 Hz, and those for a.c. and d.c. are tested at a.c. 50 Hz or d.c., whichever is the more unfavourable supply. (AS/NZS 60335.1:2020)		P
7	**MARKING AND INSTRUCTIONS**		--

IEC60335_2_23L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
7.1	After the first paragraph of the requirement insert the following variation:		--
	For appliance outlets and socket outlets accessible to the user that are incorporated in appliances connected to the supply mains; and		N/A
	- that operate at rated voltage;		N/A
	the appliances shall be marked with their maximum outlet load in Watts. (AS/NZS 60335.1:2020)		N/A
	Max. Outlet load (W)…….:		N/A
7.13	Replace the requirement with the following variation:		--
	Instructions and other text required by this standard are written in English. (AS/NZS 60335.1:2020)		P
7.15	After the last paragraph of the requirement insert the following variation:		--
	The marking of the maximum outlet load shall be close to the appliance outlet or socket outlet. (AS/NZS 60335.1:2020)		N/A
10	**POWER INPUT AND CURRENT**		--
10.1	After the last paragraph of the test specification insert the following variation:		--
	Appliance outlets and socket outlets accessible to the user that are incorporated in appliances connected to the supply mains; and		N/A
	that operate at rated voltage;		N/A
	are not loaded during the test, however their contribution to the power input is considered to be the marked outlet load per appliance outlet or socket-outlet. (AS/NZS 60335.1:2020)		N/A
11	**HEATING**		--
11.7	After the first paragraph of the test specification insert the following variation:		--
	Appliance outlets and socket outlets accessible to the user are loaded with a resistive load that gives the marked outlet load in watts. (AS/NZS 60335.1:2020)		N/A
11.8	After the first paragraph of the test specification insert the following variation:		--
	The pins of plug connectors inserted into appliance outlets accessible to the user and plugs inserted into socket outlets accessible to the user shall have a temperature rise not exceeding 45 K. (AS/NZS 60335.1:2020)		N/A
	Temperature rise (K)……...……:		N/A

IEC60335_2_23L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
19	**ABNORMAL OPERATION**		
19.13	After the seventh paragraph of the test specification insert the following variation:		--
	During and after the tests the no-load output voltage of an accessible safety extra-low voltage outlet or connector shall not have increased by more than 3 V or 10% of its no-load output voltage in normal use, whichever is higher. (AS/NZS 60335.1:2020)		N/A
	Voltage normal use (V)……...:		N/A
	Voltage abnormal operation (V)……:		N/A
	Deviation (%)……:		N/A
	During and after the tests the no-load output voltage of a USB outlet shall not increase by more than 3 V or 10% of its no-load output voltage in normal use, whichever is higher. (AS/NZS 60335.1:2020)		N/A
	Voltage normal use (V)……...:		N/A
	Voltage abnormal operation (V)……:		N/A
	Deviation (%)……:		N/A
22	**CONSTRUCTION**		--
22.2	After the first paragraph of the requirement insert the following variation:		--
	For stationary appliances permanently connected to the fixed wiring, compliance with this requirement is considered to be met if the instruction concerning disconnection incorporated in the fixed wiring is in accordance with AS/NZS 3000. (AS/NZS 60335.1:2020)		N/A
22.3	Replace the text with the following variation:		--
	VOID. (AS/NZS 60335.1:2020)		N/A
22.33	Delete the last sentence of the first paragraph of the requirement and introduce it as a new first paragraph of the requirement. (AS/NZS 60335.1:2020)		N/A
AZ.22.201	Appliances having integral pins for insertion into socket outlets shall comply with the appropriate requirements of AS/NZS 3112.		N/A
	Compliance is checked as specified in Annex J of AS/NZS 3112 (AS/NZS 60335.1:2020)		N/A

IEC60335_2_23L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
AZ.22.202	Appliance outlets and socket outlets accessible to the user that are incorporated in appliances connected to the supply mains; and		N/A
	that operate at rated voltage		N/A
	shall be single-phase and have a current rating not exceeding 16 A. (AS/NZS 60335.1:2020)		N/A
	The socket outlets shall comply with AS/NZS 3112; (AS/NZS 60335.1:2020)		N/A
	accept a 3-pin, flat-pin plug as described in figure 2.1(a1) of AS/NZS 3112. (AS/NZS 60335.1:2020)		N/A
	The appliance outlets and socket outlets shall be protected by one of the following protection devices that has a current rating not exceeding the current rating of the appliance outlet or socket-outlet: (AS/NZS 60335.1:2020)		N/A
	- a circuit breaker for equipment complying with IEC 60934; (AS/NZS 60335.1:2020)		N/A
	- a manually resettable trip-free or cycling trip-free overcurrent protection device; (AS/NZS 60335.1:2020)		N/A
	- a non-user replaceable fuse-link. (AS/NZS 60335.1:2020)		N/A
	Current of outlet (A)……..:		N/A
	Current of protection device (A)……..:		N/A
	The protection device shall be placed behind a non-detachable cover. The actuating member of the circuit breaker and the manually resettable protection device may be accessible. (AS/NZS 60335.1:2020)		N/A
	The current rating of the appliance outlets and socket outlets is obtained from the marked outlet load in watts divided by the rated voltage. (AS/NZS 60335.1:2020)		N/A
	Compliance is checked by inspection and for a manually resettable trip-free or cycling trip-free overcurrent protection device by the following tests: (AS/NZS 60335.1:2020)		N/A
	The device shall be operated at rated voltage at 136% of its current rating, in an ambient temperature of 23°C ± 2°C in a draught-free environment. (AS/NZS 60335.1:2020)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated voltage (V)……..:		N/A
	Current of outlet (A)……..:		N/A
	Test current (A)……..……..:		N/A
	Ambient temperature (°C)…..…..……..:		N/A
	The device shall operate to interrupt the current within 2 h. (AS/NZS 60335.1:2020)		N/A
	Overload condition existed for (_h,_min, _sec)…..:		N/A
	The device shall be operated at rated voltage at 600% of its current rating in an ambient temperature of 23°C ± 2°C in a draught-free environment (AS/NZS 60335.1:2020)		N/A
	Rated voltage (V)……..:		N/A
	Current of outlet (A)……..:		N/A
	Test current (A)……..……..:		N/A
	Ambient temperature (°C)…..…..……..:		N/A
	The device shall operate to interrupt the current within 5 s. (AS/NZS 60335.1:2020)		N/A
	Overload condition existed for (sec)……....:		N/A
	Immediately following the overcurrent tests, the test of clause 16.3 shall be applied, and the device shall comply with the specified requirements of the test. (AS/NZS 60335.1:2020)		N/A
	The device shall comply with the ball pressure test of 30.1 carried out at 160 °C. (AS/NZS 60335.1:2020)		N/A
	Plastic material type……..:		N/A
	Impression diameter (mm)…….……..:		N/A
	The device shall comply with the glow-wire test of 30.2.3.1 with a test severity of 960 °C. (AS/NZS 60335.1:2020)		N/A
	Plastic material type……..……..:		N/A
	Time of ignition (sec)……..……..:		N/A
	Time of extinguish (sec)……..……..:		N/A
	Specified layer placed underneath the test specimen does not ignite. ……..……..:		N/A
24	**COMPONENTS**		--
24.1	Insert the following variation before NOTE 1:		--

IEC60335_2_23L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE 201 The relevant IEC standard can be replaced with the relevant Australia/New Zealand standard where applicable. (AS/NZS 60335.1:2020)		P
25	**SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS**		--
25.1	Insert the following variation:		--
	Supply cords for single-phase portable appliances intended for direct connection to the supply mains, shall be fitted with an appropriate plug complying with AS/NZS 3112. (AS/NZS 60335.1:2020)		P
Table 11	In footnote *a insert* the following variation		--
	However, they cannot be used in class I appliances. (AS/NZS 60335.1:2020)		N/A
	Special national conditions (if any)		--
	Australia		--
5	**GENERAL CONDITIONS FOR THE TESTS**		--
AZ.5.201	For appliances, other than class III appliances, that are intended for connections to the supply mains (AS/NZS 60335.1:2020/A1:2021)		N/A
	– for single phase appliances, if marked with a rated voltage of either “230V” or “240V” test: (AS/NZS 60335.1:2020/A1:2021)		P
	• at the multiplication factor (of less than 1) × 230 V; and (AS/NZS 60335.1:2020/A1:2021)		P
	• at the multiplication factor (of greater than 1) × 240 V; (AS/NZS 60335.1:2020/A1:2021)		N/A
	– for multi-phase appliances, if marked with a rated voltage of either “400V” or “415V” test: (AS/NZS 60335.1:2020/A1:2021)		N/A
	• at the multiplication factor (of less than 1) × 400 V; and (AS/NZS 60335.1:2020/A1:2021)		N/A
	• at the multiplication factor (of greater than 1) × 415 V; (AS/NZS 60335.1:2020/A1:2021)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If marked with a rated voltage range then test: • at the multiplication factor (of less than 1) × the lower extremity of the rated voltage range; and (AS/NZS 60335.1:2020/A1:2021)		P
	• at the multiplication factor (of greater than 1) × the higher extremity of the rated voltage range; or (AS/NZS 60335.1:2020/A1:2021)		N/A
	• at the worst case voltage within the rated voltage range (AS/NZS 60335.1:2020/A1:2021)		N/A
7	**MARKING AND INSTRUCTIONS**		--
7.1	After the first paragraph of the requirement insert the following variation:		--
	Appliances intended for connection to the supply mains, other than class III appliances, shall be marked with:		--
	– a rated voltage of at least: 230 V for single-phase appliances; 400 V for multi-phase appliances; or (AS/NZS 60335.1:2020/A1:2021)		N/A
	– a rated voltage range that includes: 230 V for single-phase appliances; 400 V for multi-phase appliances. (AS/NZS 60335.1:2020/A1:2021)		P
	Insert the following variation to the addition:		--
	For hand-held hairdryers, instead of symbol ISO 7010-P026 (2011-05) refer to AZ.7.101 (AS/NZS 60335.2.23:2017/A2:2021)		P
AZ.7.101	Hand-held hairdryers shall be fitted with a label permanently attached to the supply cord. (AS/NZS 60335.2.23:2017/A2:2021)		
	The label shall be marked with the symbol of Figure AZ.101 and shall contain the substance of the following warning: (AS/NZS 60335.2.23:2017/A2:2021)		P
	WARNING: Do not remove this label. To avoid danger of electrocution, do not store or leave the hairdryer in a position where it might fall into a bath-tub, basin or other vessel containing water, even when the hairdryer switch is in the off position. Remove the plug from the socket - outlet when the hairdryer is not being used. (AS/NZS 60335.2.23:2017/A2:2021)		P

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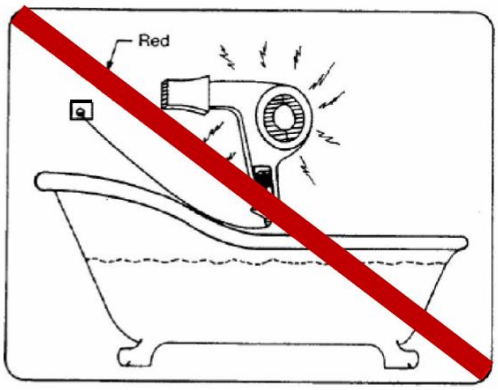
IEC60335_2_23L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	The size of the label shall be approximately 50 mm × 70 mm. (AS/NZS 60335.2.23:2017/A2:2021)		P
	The lettering of the word “WARNING” shall be upper case and be not less than 5 mm high. Other lettering shall be at least 2 mm high. (AS/NZS 60335.2.23:2017/A2:2021)		P
	The colour of the diagonal bar shown in Figure AZ.101 shall be red (AS/NZS 60335.2.23:2017/A2:2021)		P
Figure AZ.101	 Figure AZ.101 – Warning label for hand-held hairdryer (AS/NZS 60335.2.23:2017/A2:2021)		P
24	**COMPONENTS**		--
24.1.7	Telecommunication interface circuitry must comply with the Telecom Labelling Notice issued under the Telecommunications Act instead of IEC 62151 (AS/NZS 60335.1:2020)		N/A
	New Zealand		--
7	**MARKING AND INSTRUCTIONS**		--
7.1	After the first paragraph of the requirement insert the following variation:		--
	Appliances intended for connection to the supply mains, other than class III appliances, shall be marked with:		P
	– a rated voltage of: 230 V for single-phase appliances; 400 V for multi-phase appliances; or (AS/NZS 60335.1:2020/A1:2021)		N/A

IEC60335_2_23L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	– a rated voltage range that includes: 230 V for single-phase appliances; 400 V for multi-phase appliances. (AS/NZS 60335.1:2020/A1:2021)		P

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IEC60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 60335-1** **Republic of Korea NATIONAL DIFFERENCES** Household and similar electrical appliances - Safety - Part 1: General requirements			
Differences according to .....: KC60335-1(2022-06)			
TRF template used: ..... : IECEE OD-2020-F3, Ed. 1.1			
Attachment Form No. .....: KR_ND_IEC60335_1X **Attachment Originator**.....: KTL **Master Attachment** .....: Dated 2022-11-11			
	National Differences		--
7	**Marking and instructions**		--
7.17 (*new subclause*)	For ozone generating appliances with percentage of ozone exceeding 5×10^{-6} according to clause 32, the product and instructions shall indicate the following: - Precautions to prevent the user from approaching the ozone generating parts during operation - Precautions to ventilate the room for ozone removal during or after use - Prohibition of use in a confined space - Ozone concentration (㏙) and ozone generation rate(㎎ / ㎥) (applicable to appliances used by a trained specialist for sterilization and deodorization) Note The ozone concentration is measured according to clause 32, and the ozone concentration of 1 PPM corresponds to the amount of ozone generation rate of 2 mg / ㎥. - Appliances used by trained specialists for sterilization, deodorization and other purposes should include instructions for user protection and instructions on wearing protective equipment		P
24	**Components**		--
24.4 *(addition)*	Plugs for the connection of the apparatus to the supply main shall comply with the Korean requirement(KS C 8305).		P

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IEC60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
32	**Radiation, toxicity and similar hazards**		--
(addition)	The following tests shall be applied for appliances with ozone generation function, or The relevant standard shall be applied, if the test method is specified in Part 2 (particular standard). The ozone concentration produced by ozone generating appliances shall not be excessive. Compliance is checked by the following tests. The tests are carried out in a room without openings having dimensions of 2.5 m × 3.5 m × 3.0 m, the walls being covered with polyethylene sheet. The appliance is positioned in accordance with the instructions. The appliances used on a table are placed in the center of the room approximately 750 mm above the floor. The appliance is supplied at rated voltage and operated for the following duration to allow ozone to be generated at maximum. - maximum time allowed on appliance, if the continuous operation time is less than 1 hour or - maximum time allowed on appliance (24 hours if exceeding 24 hours), if the continuous operation time is over 1 hour The ozone sampling tube is to be located in the air stream 50 mm from the air outlet of the appliance. The background ozone concentration measured prior to the test is subtracted from the maximum concentration measured during the tests. Appliance provided with container or so on that can be open without aid of tool, the tests also carried out with the container or so on open. The percentage of ozone in the room shall not exceed as following; - 1×10^{-5} (if the continuous operation time is less than 1 hour), or - 5×10^{-6} (if the continuous operation time is over 1 hour)	$2,7 \times 10^{-9}$	P

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IEC60335_1X ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	This requirement is not applicable to appliances that intended to be used by trained professionals for sterilization, deodorization, etc. If the instructions of appliances state that the appliance must be installed in a space of 30 m^3 or more, the size of the test room may be increased as described in the instructions. Ozone concentration and ozone generation values according to 7.17 should be within ± 20% error range.		
	Special national conditions		--
Voltage	National supply voltages are 110 V, 220 V and 380 V.	220-240 V	P
Frequency	Only appliances having supply frequency of 60Hz or a frequency range including 60Hz are accepted.	50-60 Hz	P
Instruction	Instruction manuals and appliance marking related safety, including nameplate shall be in Korean		P

<End of report>