

TEST REPORT IEC 60335-2-16 Safety of household and similar electrical appliances Part 2-16: Particular requirements for food waste disposers	
Report Reference No.	24111114553SAF-1
Prepared by (printed name and signature)	Zafer Liang <i>Zafer Liang</i>
Reviewed by (printed name and signature)	Sam Zeng <i>Sam Zeng</i>
Approved by (Manager) (printed name and signature)	George Luo <i>George Luo</i>
Date of issue	2025-03-28
Testing Laboratory Name	Huizhou UnionTrust Quality and Technology Co., Ltd.
Address	Floors 1-2, Building 16 and 17, No. 27 Hexi Road, Liandong U Valley, China South Korea Industrial Park Start Zone, Zhongkai District, Huizhou, China
Applicant's name	Goldenhot Plastic & Hardware Products Co., Ltd
Address	Building 3, No. 2, YI' AN Middle Road, Yantian Village, Fenggang Town, DongGuan, GuangDong, China
Test specification:	
Standard	EN 60335 1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 + A16:2023 EN 60335-2-9:2003 + A1:2004 + A12:2007 + A13:2010/AC:2012 + A13:2010 + A2:2006 EN IEC 60335 2 14:2023 + A1:2023 + A11:2023 EN 60335 2 16:2003 + A1:2008 + A2:2012 + A11:2018 EN 62233:2008
Test procedure	Safety Test Report
Non-standard test method	N/A
Test item description	Electric Composter
Trade Mark	Goldhot
Manufacturer	Goldenhot Plastic & Hardware Products Co., Ltd Building 3, No. 2, YI' AN Middle Road, Yantian Village, Fenggang Town, DongGuan, GuangDong, China
Model/Type reference	CY01, CY01A, CY01B, CY01C CY02, CY02A, CY02B, CY02C, CY06 CY03, CY03A, CY03B, CY03C, CY08
Ratings	220-240V~, 50-60Hz, 500-600W, Class I

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General remarks:

If any questions of the inspection report, please proposed within 15 days from receiving the report, deadline will not be accepted. Report would be inefficiency if any scrawling or modification was made.

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

This report is submitted for the exclusive use of the client to whom it is addressed. Its significance is subject to the adequacy and representative character of the sample(s) and to the comprehensiveness of the tests, examinations or surveys made.

This report justified only the submitted samples exclusively and not necessarily implies that all other samples are also to be found in same result.

The CE marking may only be used if all relevant and effective EC directives are complied with.

Summary of testing:

From the result of our inspection and tests on the submitted samples, we conclude they comply with requirements of the standard.

Tests performed (name of test and test clause):

All clauses were performed on model CY01.

Clauses 6-8, 10, 19.7, 20-29 performed on model CY02, CY03.

Clauses 19.11.4 performed on model CY03 and declaration CY02.

All the original test data came from CB report No. EFSH24120227-IE-01-L01

Summary of compliance with National Differences:

20 pages of Test report of IEC 60335-2-9:2019 (Page 98 to page 112)

16 pages of Test report of IEC 60335-2-14:2016 (Page 113 to page 128)

16 pages of European Group Differences and National Differences for

EN IEC 60335 2 14:2023 + A1:2023 + A11:2023 (Page 129 to page 144)

13 pages of European Group Differences and National Differences for

EN 60335 2 16:2003 + A1:2008 + A2:2012 + A11:2018 (Page 145 to page 157)

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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.

Product name: Electric composter

Model: CY01

Rating(s): 220-240V~ 50-60Hz

Power: 500-600W

Place of origin: China

Manufacturer:

Goldenhot Plastic & Hardware Products Co., Ltd

Manufacturer's address:

Building 3, No. 2, YI' AN Middle Road, Yantian
Village, Fenggang Town, DongGuan, GuangDong,
China

Date code:



Remark: The markings of all models are the same except for the model name.

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Test item particulars						
Classification of installation and use: Fixed appliance and Household indoor use						
Supply Connection: Supply cord fitted with a plug						
.....: Type Y						
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: 2024-12-18						
Date (s) of performance of tests: 2024-12-18 to 2025-02-24						
General remarks:						
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.						
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.						
Name and address of factory (ies): Goldenhot Plastic & Hardware Products Co., Ltd Building 3, No. 2, YI' AN Middle Road, Yantian Village, Fenggang Town, DongGuan, GuangDong, China						
General product information and other remarks:						
The appliances covered by this report are fixed Food Waste Disposer (Electric Composter) for household and indoor use.						
Model differences:						
Model	Appearance	Capacity	Control PCB	Power PCB	Heating element	Motor
CY01, CY01A, CY01B, CY01C		2.5 L		Same	Same	Same
CY02, CY02A, CY02B, CY02C, CY06		2.5 L				
CY03, CY03A, CY03B, CY03C, CY08		3.5 L				
Models CY01A, CY01B and CY01C are identical to Model CY01, except for the model name and appearance color.						
Models CY02A, CY02B, CY02C and CY06 are identical to Model CY02, except for the model name and appearance color.						
Models CY03A, CY03B, CY03C and CY08 are identical to Model CY03, except for the model name and appearance color.						

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IEC 60335-2-16			
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
5.101	Simulation of normal operation as specified in IEC 60335-2-16:2002		P

6	CLASSIFICATION		—
6.1	Protection against electric shock: Class I, II, III	Class I	P
6.2	Protection against harmful ingress of water	IPX0	N/A

7	MARKING AND INSTRUCTIONS		—
7.1	Rated voltage or voltage range (V)	220-240V	P
	Symbol for nature of supply, or	~	P
	Rated frequency (Hz)	50-60Hz	P
	Rated power input (W), or	500-600W	P
	Rated current (A)		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark	Goldenhot Plastic & Hardware Products Co., Ltd	P
	Model or type reference	CY01, CY01A, CY01B, CY01C CY02, CY02A, CY02B, CY02C, CY06 CY03, CY03A, CY03B, CY03C, CY08	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	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
	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
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	Units of physical quantities and their symbols according to international standardized system		P
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:		P
	- marking of terminals exclusively for the neutral conductor (letter N)		P
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking of functional earthing terminals (symbol IEC 60417-5018)		N/A
	- marking not placed on removable parts		P
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	Refer to photos	P
	Applied also to switches which are part of a control		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If figures are used, the off position indicated by the figure 0		N/A
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N/A
7.11	Indication for direction of adjustment of controls		N/A
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	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
	The instructions for appliances incorporating a functional earth states that the appliance incorporates an earth connection for functional purposes only		N/A
	Additional Instructions (IEC 60335-2-16:2002)		P
7.12.1	Sufficient details for installation supplied		P
	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
	Reset buttons and reversing switches are readily accessible (IEC 60335-2-16:2002)		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

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Clause	Requirement + Test	Result - Remark	Verdict
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:		N/A
	- 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 is complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		N/A
	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		P
7.12.8	Instructions for appliances connected to the water mains:		N/A
	- 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
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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	Marking clearly legible and durable, rubbing test as specified	15 s with a piece of cloth soaked with water and again for 15 s with 1 piece of cloth soaked with petroleum spirit	P
	Signal words WARNING, CAUTION, DANGER in uppercase having a height as specified		N/A
	Uppercase letter of the text explaining the signal word not smaller than 1,6 mm		N/A
	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
	Markings checked by inspection, measurement and rubbing test as specified		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		P
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		P
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		P
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements		N/A
	For a single switching action obtained by a switching device, requirements as specified		N/A
	For appliances with a supply cord and without a switching device, the single switching action may be obtained by the withdrawal of the plug		N/A
8.1.4	Accessible part not considered live if:		--
	- 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		P
	- 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		P
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC		N/A
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		--
	- built-in appliances		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- fixed appliances		P
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed with adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only	Class II constructions	P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P

9	STARTING OF MOTOR-OPERATED APPLIANCES		N/A
	This clause of Part 1 is not applicable for this Part 2 (IEC 60335-2-16:2002)		N/A

10	POWER INPUT AND CURRENT		P
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 between the fifth second and the fifteenth second of operation, 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		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		P
	the rated power input is related to the arithmetic mean value		P
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 between the fifth second and the fifteenth second of operation, 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

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Clause	Requirement + Test	Result - Remark	Verdict
	the rated current is related to the arithmetic mean value of the range		N/A

11	HEATING		P
11.1	No excessive temperatures in normal use		P
11.2	The appliance is held, placed or fixed in position as described	Placed in normal position	P
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		P
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W)	Tested as specified heating appliances (IEC 60335-2-9), which is more severe 600W x 1.15=690W	P
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 under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)		N/A
11.7	Operation duration corresponding to the most unfavourable conditions of normal use		P
	For continuous feed: operated 4 minutes (IEC 60335-2-16:2002)		N/A
	For batch-feed: operate for two periods of 2 min. with a rest period of 30 seconds during which the disposer is switched off (IEC 60335-2-16:2002)		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
	Sealing compound does not flow out		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A

13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		—
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Clause	Requirement + Test	Result - Remark	Verdict
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times the rated power input (W)	See Cl.11.4	P
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V)		N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
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		P
	Leakage current measurements	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4	(see appended table)	P
	No breakdown during the tests		P

14	TRANSIENT OVERVOLTAGES		—
	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

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
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
	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	Obstruction of the outlet does not affect the electrical insulation (IEC 60335-2-16:2002)		N/A
	Outlet blocked and sink filled to 200 mm (IEC 60335-2-16:2002)		N/A
	15 min operation/protective device operates (IEC 60335-2-16:2002)		N/A
	Test repeated after 15 min (IEC 60335-2-16:2002)		N/A
	The appliance withstands the electric strength test of 16.3 (IEC 60335-2-16:2002)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29 (IEC 60335-2-16:2002)		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	23°C, 93%RH, 48h	P
	Reassembly of those parts that may have been removed		P
	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)	1.06x240V	P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by $\sqrt{3}$ (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	(see appended table)	P
	No breakdown during the tests		P

17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS	—
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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use	(see appended table)	P
	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)	1.06X240	P
	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 in Table 3 by more than 15 K		P
	Temperature of the winding not exceeding the value specified in Table 8		P
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A

18	ENDURANCE		—
	This clause of Part 1 is not applicable for this Part 2 (IEC 60335-2-16:2002)		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		P
	- if applicable, to the test of 19.5		P
	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		P
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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)	0.85X500W=425W	P
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W)	1.24X600W=744W	P
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		P
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		P
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		P
	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		N/A
	- locking moving parts of other appliances		P
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, unless		N/A
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	Other appliances supplied with rated voltage for a period as specified	Until steady conditions are established	P
	Operated without water: continuous feed type for 30 seconds (IEC 60335-2-16:2002)		N/A
	Operated without water: batch feed type for 5 minutes (IEC 60335-2-16:2002)		N/A
	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		N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N/A
	Motor-operated and combined appliances for which 30.2.3 is applicable and that use overload protective devices relying on electronic circuits to protect the motor windings, are also subjected to the test		N/A
	Winding temperatures not exceeding values as specified	(see appended table)	N/A
19.10	Series motor operated at 1.3 times rated voltage for 1 min (V)		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		N/A
	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
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		P
	During and after each test the following is checked:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- the temperature of the windings do not exceed the values specified in table 8	No higher temperature than table 11.8 for the transformer winding.	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		N/A
	- 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		P
	they comply with IEC 60384-14		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits		P
	This fault condition is not applied between the two circuits of an optocoupler		P
	e) failure of triacs in the diode mode		P
	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		N/A

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	- a device that can be placed in the stand-by mode,		P
	- 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.		N/A
	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		P
	Earthed heating elements in class I appliances disconnected		P
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s 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).....:	Rated: 3.15A Measured: >12A	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	P
	- supplementary insulation (V).....:	1750	P
	- reinforced insulation (V).....:	3000	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		P
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		--
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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		P
	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

20	STABILITY AND MECHANICAL HAZARDS		—
20.1	Appliances having adequate stability	Fixed appliance	N/A
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		N/A
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		N/A
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
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		P
	Not possible to touch dangerous moving parts with the test probe described		P
	Test probe not applied to the inlet (IEC 60335-2-16:2002)		N/A

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
20.101	Unless access to moving parts through inlet opening is otherwise prevented, any cover over the inlet opening is interlocked so appliance can only be operated when cover is in closed position (IEC 60335-2-16:2002/A2:2011)	The moving parts of motor was controlled by interlock switch. Thus, the moving parts cannot be accessed.	P
	Test probe 31 applied with a force of 50 N to inlet opening with any cover open and detachable parts preventing food waste from being ejected or utensils from falling into grinding chamber removed (IEC 60335-2-16:2002/A2:2011)		P
	Touching moving parts with probe not possible (IEC 60335-2-16:2002/A2:2011)		P
	Moving parts located at least 100 mm from top of inlet (IEC 60335-2-16:2002/A2:2011)		P
	Interlock cover relying on electronic circuit tested at rated voltage and under normal operation (Clause 19.11.4.1 to 19.11.4.7) (IEC 60335-2-16:2002/A2:2011)		N/A
	Not possible to open cover during and after test with force of 50 N applied to cover (IEC 60335-2-16:2002/A2:2011)		N/A
	For appliance under normal operation, fault conditions a) to g) of Cl. 19.11.2 applied to the electronic circuit (IEC 60335-2-16:2002/A2:2011)		N/A
	Not possible to open cover during and after test with force of 50 N applied to cover (IEC 60335-2-16:2002/A2:2011)		N/A
	If electronic circuit is programmable, software contains measures to control fault/error conditions in Table R.1 and evaluated to Annex R (IEC 60335-2-16:2002/A2:2011)		N/A
20.102	Food waste not ejected through inlet opening (IEC 60335-2-16:2002)		N/A

21	MECHANICAL STRENGTH		—
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J	(see appended table)	P
	The appliance shows no damage impairing compliance with this standard, and		P
	- compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If necessary, repetition of groups of three blows on a new sample		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A

22	CONSTRUCTION		—
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		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		P
	- 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
	Single-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 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless		N/A
	- rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A
22.5	No risk of electric shock when touching pins, for appliances having a capacitor with rated capacitance equal to or greater than 0,1 μ F, the appliance being disconnected from the supply at the instant of voltage peak		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Voltage not exceeding 34 V (V)	8V	P
	If compliance relies on the operation of an electronic circuit, the electromagnetic phenomena tests of 19.11.4.3 and 19.11.4.4 are applied		N/A
	The discharge test is then repeated three times, voltage not exceeding 34 V (V)		N/A
22.6	Electrical insulation not affected by condensing water or leaking liquid		N/A
	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks		N/A
	In case of doubt, test as described		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		P
	- the substance has adequate insulating properties		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- 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	50N pull and push for enclosure and handle	P

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UTTR-SAF-IEC 60335-2-16-V1.0

IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
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	Knob: 15N	P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	Handle: 30N	P
	If the part is removed and can be contained within the small parts cylinder, it is considered to be a choking hazard		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	- constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		P
	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
	- material impregnated		N/A

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		P
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported		N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N/A
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		N/A
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		P
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		P
	- so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		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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IEC 60335-2-16			
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
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		P
	- unearthed metal parts separated from live parts by basic insulation only		N/A
	Electrodes not used for heating liquids		P
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		N/A
	- the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	- the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	- the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	- they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	- the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		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		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		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		P

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Clause	Requirement + Test	Result - Remark	Verdict
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
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

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts have at least double insulation or reinforced insulation between live parts and the functionally earthed parts		N/A
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N/A
	- the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N/A
22.55	Devices operated to stop the intended function of the appliance, if any, are distinguished from other manual devices by means of shape, size, surface texture or position	Push on push off switch	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		N/A
	– reduction in heat output; or		N/A
	– 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 was not applied to glass, ceramics or similar materials		N/A
22.101	Disposer incorporates a protective device (IEC 60335-2-16:2002)		P
22.102	Reset button of protective device is recessed or guarded (IEC 60335-2-16:2002)	No reset button for protective device	N/A
	Rod not less than 1,5 mm from button (IEC 60335-2-16:2002)		N/A
	Device will operate and will not reset with rod applied (IEC 60335-2-16:2002)		N/A
22.103	Disposer constructed so that feed chamber and guards can be cleaned (IEC 60335-2-16:2002)		P
22.104	Grind chamber resistant to mechanical damage (IEC 60335-2-16:2002)		P
	Test with steel bar at rated voltage for 15 s unless motor stalls first (IEC 60335-2-16:2002)		P
	After test, disposer comply with 8.1, 15.2 and clause 29 (IEC 60335-2-16:2002)		P
	Grind chamber resistant to attack by food waste (IEC 60335-2-16:2002)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Natural rubber not used (IEC 60335-2-16:2002)		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		P
	Wiring effectively prevented from coming into contact with moving parts		P
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges		N/A
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		P
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		P
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use, or		P
	100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		P
	Not more than 10% of the strands of any conductor broken, and		N/A
	- not more than 30% for wiring supplying circuits that consume no more than 15W		P
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use		P
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		N/A
	- no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
	For class II construction, the requirements for supplementary insulation and reinforced insulation apply, except that		P
	- 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		P
	- 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		P
	- the contact pressure is provided by spring terminals		N/A
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	COMPONENTS		—
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components	(see appended table)	P
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		P
	Relays tested as part of the appliance, or		P
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N/A
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		P
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, comply with IEC 60384-14		P
	If the capacitors have to be tested, they are tested according to Annex F		N/A
24.1.2	Transformers in associated switch mode power supplies comply with Annex BB of IEC 61558-2-16	See Appendix 2	P
	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

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
24.1.3	Switches comply with IEC 61058-1, the number of cycles of operation being at least 10 000		P
	If they have to be tested, they are tested according to Annex H		N/A
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	If the switch only operates a motor starting relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N/A
24.1.4	Automatic controls comply with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		—
	- thermostats:	10 000	N/A
	- temperature limiters:	1 000	N/A
	- self-resetting thermal cut-outs:	300	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
	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		P
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A
	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9		N/A
24.1.5	Appliance couplers comply with IEC 60320-1		N/A
	However, for class II appliances classified higher than IPX0, the appliance couplers comply with IEC 60320-2-3		N/A
	Interconnection couplers comply with IEC 60320-2-2		N/A
24.1.6	Small lamp holders similar to E10 lampholders comply with IEC 60238, the requirements for E10 lampholders being applicable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691		P
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		P
	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.....:	See Table 24.1	P
24.2	Appliances not fitted with:		--
	- switches, automatic controls or power supplies in flexible cords		P
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	- thermal cut-outs that can be reset by soldering, unless		P
	- the solder has a melting 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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:		N/A
	- 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
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N/A
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E		N/A
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N/A
24.101	Thermal cut-outs and protective devices non-self-resetting (IEC 60335-2-16:2002)	Not continuous-feed type	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
	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, 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		--

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Clause	Requirement + Test	Result - Remark	Verdict
	<ul style="list-style-type: none"> light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg 		N/A
	<ul style="list-style-type: none"> ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances 	H05VV-F	P
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		N/A
	<ul style="list-style-type: none"> heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg 		N/A
	<ul style="list-style-type: none"> heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances 		N/A
	- halogen-free, low smoke, thermoplastic insulated and sheathed		N/A
	<ul style="list-style-type: none"> light duty halogen-free low smoke flexible cable (62821 IEC 101) for circular cable and (62821 IEC 101f) for flat cable 		N/A
	<ul style="list-style-type: none"> Ordinary duty halogen-free low smoke flexible cable (62821 IEC 102) for circular cable and (62821 IEC 102f) for flat cable 		N/A
	Supply cords for class III appliances adequately insulated		N/A
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N/A
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm ²).....:	Rated current: 2.5A Cross-sectional area: 0.75 mm ²	P
25.9	Supply cords not in contact with sharp points or edges		P
25.10	Supply cord of class I appliances have a green/yellow core for earthing		P
	In multi-phase appliances, the colour of the neutral conductor of the supply cord is blue		N/A
	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		P
	- the contact pressure is provided by spring terminals		N/A
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure		N/A

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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		N/A
	- the appliance is class 0, or		N/A
	- a class III appliance not containing live parts		N/A
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		—
	- applied force (N).....:		N/A
	- number of flexings.....:		N/A
	The test does not result in:		—
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
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).....:	100N, 0.35Nm	P
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm).....:		N/A
	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm).....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Cord not damaged; maximum 2 mm displacement of the cord	0.5mm	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
	- 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	Type Y	P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		N/A
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N/A
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A
25.22	Appliance inlets:		N/A
	- live parts not accessible during insertion or removal		N/A
	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
	- 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:		N/A
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N/A

26	TERMINALS FOR EXTERNAL CONDUCTORS		—
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	- for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		N/A
	- the connections are soldered		N/A
	Screws and nuts not used to fix any other component, except		N/A
	- internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N/A
	- barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		N/A
	Terminals fixed so that when the clamping means is tightened or loosened:		N/A
	- the terminal does not become loose		N/A
	- internal wiring is not subjected to stress		N/A
	- neither clearances nor creepage distances are reduced below the values in clause 29		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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 (mm ²).....:		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		N/A
	- conductors ends fitted with means suitable for screw terminals		N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	Type Y	P

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Clause	Requirement + Test	Result - Remark	Verdict
	For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below values for supplementary insulation if the conductor becomes free		N/A

27	PROVISION FOR EARTHING		—
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P
	Class 0, II and III appliances have no provision for protective earthing		N/A
	Class II appliances and class III appliances can incorporate an earth for functional purposes		N/A
	Safety extra-low voltage circuits not earthed, unless		P
	protective extra-low voltage circuits		N/A
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm ² , 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
	For class II appliances and class III appliances that incorporate an earth for functional purposes requirements not applicable		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		P
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		P
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		P
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		P
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω)	0.027 Ω	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A

28.1	SCREWS AND CONNECTIONS		—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		N/A
	For screws and nuts; torque-test as specified in table 14.....:	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless		P
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material		P
	This requirement does not apply to electrical connections in circuits of appliances for which:		--
	<ul style="list-style-type: none"> • 30.2.2 is applicable and that carry a current not exceeding 0,5 A 		N/A
	<ul style="list-style-type: none"> • 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections subjected to torsion		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
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		P
	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		P
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	However, clearances at crossover points are not measured		P
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		N/A
	- table 16 based on the rated impulse voltage		N/A
	- 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		P
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	Power PCB	P
	- precautions taken to protect the insulation; pollution degree 1	End of heating element	P
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		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		P
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		N/A
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm		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		P
	Supplementary insulation consist of at least 2 layers		P
	Reinforced insulation consist of at least 3 layers		P
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)	(see appended table 30.1)	N/A
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		N/A
	- for unattended appliances, 30.2.3 applies		P
	For appliances for remote operation, 30.2.3 applies		N/A
	For base material of printed circuit boards, 30.2.4 applies		P
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550°C	(see appended table 30.2)	P
	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or		N/A
	- the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N/A
30.2.2	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 3mm of such connections,		N/A
	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:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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 30.2/30.4)	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		N/A
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		P
	- parts of non-metallic material, other than small parts, within a distance of 3 mm,		P
	Parts subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C	(see appended table 30.2)	P
	Glow-wire applied to an interposed shielding material, if relevant		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		P
	- parts of non-metallic material within a distance of 3mm,		P
	Parts subjected to the glow-wire test of IEC 60695-2-11 with appropriate severity level:	(see appended table 30.2)	P
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		P
	- 650 °C, for other connections		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	- parts shielded by a flame barrier that meets the needle-flame test of Annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of Annex E	(see appended table 30.2/30.4)	N/A
	Test not applicable to conditions as specified.....:	PCBs are V-0	P

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		P
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:		N/A
	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:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
	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 state the substance of the following:		N/A
	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:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
	Test conditions as specified		P
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		—

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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		—

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Clause	Requirement + Test	Result - Remark	Verdict
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 - 19.1.2 of IEC 61558-2-6 apply		N/A
29	Clearances, creepage distances and solid insulation		N/A
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
	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		N/A
	Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		—
	Switches are not required to be marked		N/A
	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		N/A
	Sub-clauses 15.1 and 15.2 not applicable		N/A
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless		N/A
	- 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
	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation		N/A
	Sub-clauses 17.2.2 and 17.2.5.2 not applicable		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1		N/A
	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K)		N/A
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		N/A
	It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24		N/A
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		—

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
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
19.1.101	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
	- 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		—
22.1.101	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

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Clause	Requirement + Test	Result - Remark	Verdict
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	ANNEX L (INFORMATIVE) - GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		—
	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	End of heating element	P
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected	Power PCB	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		—

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Clause	Requirement + Test	Result - Remark	Verdict
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		—
7	Test apparatus		—
7.3	Test solutions		—
	Test solution A is used		P
10	Determination of proof tracking index (PTI)		—
10.1	Procedure		—
	The proof voltage is 100V, 175V, 400V or 600V...:	175V	P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N/A
10.2	Report		—
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		P
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 150V, 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 150V, 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	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 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

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Clause	Requirement + Test	Result - Remark	Verdict
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A
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 and 20.101 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 and 20.101 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		N/A
	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
R.3.2	Specification		—

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Clause	Requirement + Test	Result - Remark	Verdict
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	Verdict
1 CPU 1.1 Registers	Stuck at	Functional test, or periodic self-test using either: <ul style="list-style-type: none"> - 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

IEC 60335-2-16						
Clause	Requirement + Test			Result - Remark		Verdict
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
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 communica tion	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 Wrong sequence	Time-slot monitoring, or scheduled transmission Time-slot and logical monitoring, or comparison of redundant communication channels by either: - reciprocal comparison - independent hardware comparator Logical monitoring, or time-slot monitoring, or Scheduled transmission	H.2.18.10.4 H.2.18.18 H.2.18.10.3 H.2.18.15 H.2.18.3 H.2.18.10.2 H.2.18.10.4 H.2.18.18			N/A
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

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IEC 60335-2-16						
Clause	Requirement + Test			Result - Remark		Verdict
7.2.2 Analog multiplexer	Wrong addressing	Plausibility check	H.2.18.13			N/A
8 VOID						N/A
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
<p>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.</p> <p>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.</p>						

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

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	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

IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
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
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/m ² 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:		—

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IEC 60335-2-16			
Clause	Requirement + Test	Result - Remark	Verdict
7.1	At least three test specimens are tested		N/A
	Ten samples of internal wiring is tested		N/A
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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10.1	TABLE: Power input deviation					P
Input deviation of/at:	P rated (W)	P measured (W)	ΔP	Required ΔP	Remark	
For model CY01:						
220V, 50Hz	500	498	-0.4%	-10% to +5%	P	
220V, 60Hz	500	495	-1.0%	-10% to +5%	P	
240V, 50Hz	600	592	-1.3%	-10% to +5%	P	
240V, 60Hz	600	588	-2.0%	-10% to +5%	P	
For model CY02:						
220V, 50Hz	500	496	-0.8%	-10% to +5%	P	
220V, 60Hz	500	490	-2.0%	-10% to +5%	P	
240V, 50Hz	600	592	-1.3%	-10% to +5%	P	
240V, 60Hz	600	585	-2.5%	-10% to +5%	P	
For model CY03:						
220V, 50Hz	500	498	-0.4%	-10% to +5%	P	
220V, 60Hz	500	496	-0.8%	-10% to +5%	P	
240V, 50Hz	600	590	-1.7%	-10% to +5%	P	
240V, 60Hz	600	586	-2.3%	-10% to +5%	P	
Supplementary information:						

10.2	TABLE: Current deviation					N/A
Current deviation of/at:	I rated (A)	I measured (A)	ΔI	Required ΔI	Remark	
—	—	—	—	—	—	
Supplementary information:						

11.8	TABLE: Heating test, thermocouple measurements			P
	Test voltage (V)	261V, 690W		—
	Ambient (°C)	24.5		—
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Power Cord		9.0	50	
RV1, T105		18.9	80	
Winding of L2		19.4	65	
C6, T100		17.3	75	
Winding of L3		18.1	65	
C7, T100		17.5	75	
PCB near DB1		17.4	120	
C2, T105		18.2	80	
PCB near T1		26.2	120	

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Winding of T1	33.9	85
CY1, T125	22.5	100
CY2, T125	24.3	100
Winding of L4	26.9	65
REL1, T105	24.8	80
U1, T100	21.2	75
C3, T100	17.7	75
Winding of L5	14.0	65
Internal wire to motor, T200	27.8	175
Internal wire to heating element, T200	23.0	175
Thermal cut out, T270	41.9	245
Motor	31.8	65
DC fan	15.6	65
Thermal motor protector, T150	28.9	125
Internal wire to PCB, T105	20.5	80
Internal wire to DC fan, T80	10.8	55
Internal wire to NTC, T200	40.8	175
Internal wire to micro switch, T200	12.0	175
Micro switch, T85	12.6	60
Close-end connector, T105	18.7	80
Silicone terminal tube, T200	45.9	175
Silicone sleeving, T200	38.9	175
Plastic enclosure, inside	13.1	Ref.
Plastic enclosure, outside	7.0	60
Button	7.5	60
The corner	3.3	60
Supplementary information:		

11.8	TABLE: Heating test, resistance method					N/A
	Test voltage (V)	—			—	
	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) .. :	261V, 690W		—

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	Motor-operated and combined appliances: 1.06 x rated voltage (V)	—	—
Leakage current between:		I (mA)	Max. allowed I (mA)
Live parts and earthing parts		0.06	0.75
Live parts and switch button/enclosure		0.03	0.35 peak
Supplementary information:			

13.3	TABLE: Electric strength			P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)	
Live parts and earthing parts		1000	No	
Internal wire to switch button/enclosure		1750	No	
Live parts and switch button/enclosure		3000	No	
PRI parts of transformer to SEC parts of transformer		3000	No	
Core of transformer to SEC parts of transformer		3000	No	
Supplementary information:				

14	TABLE: Transient overvoltages					N/A
Clearance between:		CI (mm)	Required CI (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)		254.4V		—
Three phase appliances 1.06 x rated voltage divided by $\sqrt{3}$ (V)		—		—
Leakage current between:		I (mA)	Max. allowed I (mA)	
Live parts and earthing parts		0.20	0.25	
Live parts and switch button/enclosure		0.08	0.25	
Supplementary information:				

16.3	TABLE: Electric strength			P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)	
Live parts and earthing parts		1250	No	
Internal wire to switch button/enclosure		1750	No	
Live parts and switch button/enclosure		3000	No	
Supplementary information:				

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17	TABLE: Overload protection, thermocouple measurements		N/A
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (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)	ΔT (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	Refer to Cl.19.11.2			
Are there “off” or “stand-by” position?			YES	Normal operation			
The unintended operation of the appliance results in dangerous malfunction?			NO	N/A			
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	Refer to Cl.19.2	No hazard	NTC	N/A	N/A	Disabled NTC	P
19.3	Refer to Cl.19.3	No hazard	NTC	N/A	N/A	Disabled NTC	P
19.4	Refer to Cl.19.4	No hazard	NTC	N/A	N/A	Disabled NTC	P
19.5	Refer to Cl.19.5	No hazard	NTC	N/A	N/A	Disabled NTC	P
19.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.7	Refer to Cl.19.7	No hazard	Programme	N/A	N/A	Disabled programme and motor keep working	P
19.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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19.11.2	Refer to Cl.19.11.2	No hazard	N/A	N/A	N/A	N/A	P
19.11.4.8	Refer to Cl.19.11.4.8	No hazard	N/A	N/A	N/A	N/A	P
19.10X	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Supplementary information:							

19.7	TABLE: Abnormal operation, locked rotor/moving parts					P
	Test voltage (V)	240			—	
	Ambient, t1 (°C)	22.8			—	
	Ambient, t2 (°C)	23.0			—	
Temperature of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
DC motor surface		—	—	94.5	117.5	150
Supplementary information:						

19.7	TABLE: Abnormal operation, locked rotor/moving parts					P
	Test voltage (V)	240			—	
	Ambient, t1 (°C)	22.8			—	
	Ambient, t2 (°C)	23.0			—	
Temperature of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
DC fan (6025)		—	—	68.9	91.9	150
DC fan (7530)		—	—	60.5	83.5	150
Supplementary information:						

19.9	TABLE: Abnormal operation, running overload					N/A
	Test voltage (V)	—			—	
	Ambient, t1 (°C)	—			—	
	Ambient, t2 (°C)	—			—	
Temperature of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
—		—	—	—	—	—
Supplementary information:						

19.13	TABLE: Abnormal operation, temperature rises					P
Thermocouple locations:			Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)		
Power cord			32.0	150		
Test corner			26.3	150		
Plastic enclosure, inside			36.1	Ref.		
Supplementary information: Only worse data have been recorded						

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21.1	TABLE: Impact Resistance			P
Impacts per surface	Surface tested	Impact energy (Nm)	Comments	
3	Enclosure	0.5	No damage	
Supplementary information:				

24.1	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
EU plug with cord	Dongguan Jiazhong Wire Products Co., Ltd.	LY-803	250VAC, 16A	IEC 60884-1	SGS PS/22/GEN/0028	
	Dongguan Jiazhong Wire Products Co., Ltd.	LY-807	250VAC, 2.5A	EN 50075	SGS ENEC16/20/02013/M1	
	Dongguan Jiazhong Wire Products Co., Ltd.	LY-204	250VAC, 10A	EN 60320-1	SGS ENEC16/20/02015/M1	
	Dongguan Jiazhong Wire Products Co., Ltd.	LY-205	250VAC, 2.5A	EN 60320-1	SGS ENEC16/20/02014/M1	
	Dongguan Jiazhong Wire Products Co., Ltd.	LY-206	250VAC, 2.5A	EN 60320-1	SGS ENEC16/20/02016/M1	
	Dongguan Jiazhong Wire Products Co., Ltd.	LY-204B	250VAC, 10A	EN 60320-1	SGS ENEC16/21/02001	
	Dongguan Jiazhong Wire Products Co., Ltd.	JZ-306	250VAC, 10A	EN IEC 60320-1	SGS ENEC16/22/02004	
	Dongguan Chuangyang wire Electronics Co., Ltd.	H05VV-F	3x0,75 mm ²	DIN EN 50525-2-11	VDE 40054569	
UK plug with cord	Dongguan Jiazhong Wire Products Co., Ltd.	LY-88	250VAC, 13A	BS 1363-1	SGS PS/22/GEN/0044	
	Dongguan Chuangyang wire Electronics Co., Ltd.	H05VV-F	3x0,75 mm ²	DIN EN 50525-2-11	VDE 40054569	
Note: The rating of BS fuse-links should be employed according to the table 2 of BS 1363-1:2016+A1:2018						
KR plug with cord	Dongguan Jiazhong Wire Products Co., Ltd.	LY-803	250VAC, 16A	KC60884-1	KC SU04331-22001	
	Dongguan Chuangyang wire Electronics Co., Ltd.	H05VV-F	3x0,75 mm ²	KC60227-5 KC60227-2	KC SU01265-21002	

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Internal wire to DC fan	DONGGUAN TRIUMPHCABLE CO LTD	1007, 2468	26AWG, 80°C, 300V	IEC 60335-1 IEC 60335-2-16 UL 758	Tested with appliance UL E249743
Internal wire to PCB	GUANGDONG FUYUANTONG CABLE TECHNOLOGY CO LTD	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	IEC 60335-1 IEC 60335-2-16 UL 758	Tested with appliance UL E241989
(Alternative)	ZHONGSHAN CITY YLONG ELECTRICAL APPLIANCES CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E343418
(Alternative)	FOSHAN SHUDE PANTAI SPECIAL WIRE ROD ELECTRONICS CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E346532
(Alternative)	SHENZHEN SHUNJIA ELECTRICAL TECHNOLOGY CO LTD	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E490463
(Alternative)	SHENZHEN JTK WIRE&CABLE CO LTD	1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E359216
(Alternative)	SHENZHEN MYSUN INSULATION MATERIALS CO LTD	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E239689
(Alternative)	DONGGUAN ZHONGZHENG WIRE&CABLE TECH CO LTD	2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E336285
(Alternative)	SHENZHEN HUAYUANXIN ELECTRIC APPLIANCE CO LTD	2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E358921
(Alternative)	FOSHAN ZEHONGYING ELECTRICAL TECHNOLOGY CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E534290

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(Alternative)	HUIZHOU YUEWEI ELECTRICAL MATERIALS CO LTD	1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E333364
(Alternative)	ZHONGSHAN CITY DINGXIANG ELECTRICAL CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E354487
(Alternative)	SHENZHEN HAIXINDA WIRE&CABLE CO LTD	2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E471769
(Alternative)	DONGGUAN ZELONGKANG WIRE CO LTD	1322, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E330488
(Alternative)	Beiliu GuijiangLong Wire and Cable Co Ltd	1322, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E516664
(Alternative)	SHENZHEN HONGYA ELECTRONICS CO LTD	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E346933
(Alternative)	SHENZHEN AMFULL WIRE&CABLE CO LTD	1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E479305
(Alternative)	QIFURUI ELECTRONICS CO	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E211048
(Alternative)	DONGGUAN WENCHANG ELECTRONIC CO.,LTD	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E214500
(Alternative)	SHEYANG GUANGMING PLASTIC WIRE CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E190412
(Alternative)	JIANGYIN CITY TIANCHENG ELECTRONIC & CABLE CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E332921
(Alternative)	WUXI HUACHENG CABLE CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E206992

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(Alternative)	NIZING ELECTRIC CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E215834
(Alternative)	KELIN WIRE COLTD (DONGGUAN)	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E250866
(Alternative)	GUANGZHOU TANG YAO WIRES CO LTD	1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E207696
(Alternative)	ZHONGSHAN HUALAN ELECTRONIC CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E303124
(Alternative)	Guangdong XingGuang Electric Heating Products Co Ltd	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E315073
(Alternative)	GUANGDONG YONGROI CABLE TECHNOLOGY CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E204893
(Alternative)	FOSHAN CITY ZHENG GUAN FLUORPLASTICS WIRE FACTORY	1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E307535
(Alternative)	HONG SHUN WIRE & CABLE FLUOROPLASTICS FACTORY	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E238396
(Alternative)	YANG TAI WIRE & CABLE CO LTD	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E214859
(Alternative)	DONGGUAN ZHIHE ELECTRICAL CABLE TECH CO LTD	1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E258239
(Alternative)	GUANGDONG HAERKN NEW ENERGY CO LTD	3122, 1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E300956

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(Alternative)	DONG GUAN SHENG PAI ELECTRIC WIRE & CABLE CO LTD	3122, 1332, 2651	16-28AWG, Min. 105°C, 300V	UL 758	UL E347603
(Alternative)	SHENZHEN JIAHUIDA ELECTRONICS CO LTD	1332	16-28AWG, Min. 105°C, 300V	UL 758	UL E361915
Internal wire to NTC	DONGGUAN ZHIHE ELECTRICAL CABLE TECH CO LTD	1332	28AWG, 200°C, 300V	UL 758	Tested with appliance UL E258239
(Alternative)	SHENZHEN HONGYA ELECTRONICS CO LTD	2651	28AWG, 105°C, 300V	UL 758	UL E346933
Internal wire to interlock switch	Junhao Wire Technology CoLtd (dongguan)	1332	20AWG, 200°C, 600V	IEC 60335-1 IEC 60335-2-16 UL 758	Tested with appliance UL E357447
Internal wire to heating element	Zhongshan City Dingxiang Electrical Co Ltd	3122	18AWG, 200°C, 300V	IEC 60335-1 IEC 60335-2-16 UL 758	Tested with appliance UL E354487
Internal wire to motor	SHENZHEN SHUNJIA ELECTRICAL TECHNOLOGY CO LTD	1332	20AWG, 200°C, 300V	IEC 60335-1 IEC 60335-2-16 UL 758	Tested with appliance UL E490463
(Alternative)	DONGGUAN ZHIHE ELECTRICAL CABLE TECH CO LTD	1332	20AWG, 200°C, 300V	UL 758	UL E258239
NTC	NANJING SHIHENG ELECTRONICS CO LTD	3950K	R25=100KΩ±1% B25/50=3950K±1 %	IEC 60335-1 IEC 60335-2-16	Tested with appliance
Thermal cut- out	Zhongshan City ZhongAn Thermostat Co Ltd	KSD301	250V, 10A, Tf:170°C, T270	IEC 60730-2-9 IEC 60730-1	TUV R 50259166
Thermal link	ZHANGZHOU AUPO ELECTRONICS CO LTD	BF 172x	250VAC, 16A; Tf:172°C	IEC 60691	VDE 40005418

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Interlock switch	DONGGUAN DEWO ELECTRONIC TECHNOLOGY CO LTD	SS	125/250VAC, 5A, 5E4, T125	IEC 61058-1	CB DK-97739-UL
(Alternative)	SHUNDE DISTRICT OF FOSHAN CITY YIMINGDA ELECTRICAL COMPANY LTD	LXW-3-6	125/250VAC, Min. 5A, 1E4, Min. T85	IEC 61058-1	CB NO118371
(Alternative)	Siber(China) Electric Mfg. Limited	KW4A(S)	125/250VAC, Min. 5A, 1E4, Min. T105	IEC 61058-1	CB CN53247
(Alternative)	ZHE JIANG BEI ER JIA ELECTRONICS CO., LTD	KW02	250VAC, Min. 5A, Min. 1E4, Min. T105	IEC 61058-1	CB DK-115914-UL
Heating element	Shunde Jinhuishun Electric Heating Material Co., Ltd.	WJGH CY06	Marked 220V, 500W (Tested at 220-240V)	IEC 60335-1 IEC 60335-2-16	Tested with appliance
DC fan (For Model CY01)	Dongguan Xinrui Electronics Co., LTD	6025	24VDC, 0,13A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
DC fan (For Model CY02, CY3)	Dongguan Xinrui Electronics Co., LTD	7530	24VDC, 0,18A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
Motor	Shenzhen High Precision Motor Co., LTD	R3430-2663-137GX	24VDC, 0,45A Max. 8rpm, Class A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
-Winding	ZHEJIANG HONGBO TECHNOLOGY CO LTD	QZY-1/180	180°C	UL 1446	UL E221719
(Alternative)	DONG GUAN YIDA INDUSTRIAL CO LTD	QZY-1/180	180°C	UL 1446	UL E344055
-Thermal motor protector	Nanjing Shaodi Electronic Co., Ltd.	KW	250VAC, 5A, Tf:105°C, 1E4	IEC 60730-1 IEC 603730-2-9	TUV R 50521902
-Bobbin	Guangdong Xingshengdi Technology Co Ltd	XD-203PR(#GF(X)(f2)	V-0, 130°C	IEC 60335-1 IEC 60335-2-16 UL 94	Tested with appliance / UL E342846

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(Alternative)	Guangdong Xingshengdi Technology Co Ltd	XD203V (#)GF(X)(F2)	V-0, 140°C	IEC 60335-1 IEC 60335-2-16 UL 94	Tested with appliance / UL E342846
PCB bracket	TEIJIN POLYCARBONATE CHINA LTD	PC	Min. thickness 2,5mm	IEC 60335-1 IEC 60335-2-16	Tested with appliance
Plastic enclosure	CHI MEI CORPORATION	ABS	Min. thickness 2,1mm	IEC 60335-1 IEC 60335-2-16	Tested with appliance
Control panel	TEIJIN POLYCARBONATE CHINA LTD	PC	Min. thickness 2,5mm	IEC 60335-1 IEC 60335-2-16	Tested with appliance
Connector on PCB	ZHEJIANG LIANHE ELECTRONIC CO LTD	VH	Rated 250V, 7A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
(Alternative)	ZHEJIANG CHENGMING ELECTRONCS TECHNOLOGY CO LTD	VH	Rated 250V, 7A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
(Alternative)	SHENZHEN JUNAD CONNECTOR CO LTD	A3961	Rated 250V, 7A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
(Alternative)	YUEQING JIADE ELECTRONICS CO LTD	VH-2A, VH-3A	Rated 250V, 7A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
(Alternative)	ZHEJIANG HONGXING ELECTRICAL CO LTD	HX396	Rated 250V, 7A	IEC 60335-1 IEC 60335-2-16	Tested with appliance
PCB	KINGBOARD LAMINATES HOLDINGS LTD	KB-5150	V-0, 130°C	IEC 60335-1 IEC 60335-2-16 UL 94	Tested with appliance UL E123995
(Alternative)	SHANDONG JINBAO ELECTRONICS CO LTD	ZD-95(G)F	V-0, 130°C	UL 94	UL E141940
(Alternative)	KINGBOARD LAMINATES HOLDINGS LTD	KB-6160	V-0, 130°C	UL 94	UL E123995
(Alternative)	KINGBOARD LAMINATES HOLDINGS LTD	KB-3152	V-0, 130°C	UL 94	UL E123995

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(Alternative)	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	GDM-R1, ILM-R1	V-0, 130°C	UL 94	UL E330731
(Alternative)	JIANGXI PROVINCE HANGYU NEW MATERIAL CO., LTD.	HY-8101	V-0, 130°C	UL 94	UL E359866
Fuse link (F1)	XC ELECTRONICS (SHENZHEN) CORP LTD	5TE	T8A, 250VAC	IEC 60127-1 IEC 60127-3	VDE 40029550
(Alternative)	DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD	932	T8A, 250VAC	IEC 60127-1 IEC 60127-7	TUV R 50279350
(Alternative)	DONGGUAN CHEVRON ELECTRONIC TECHNOLOGY CO LTD	SET	T8A, 250VAC	IEC 60127-1 IEC 60127-3	TUV J 50426507
(Alternative)	ZHONG SHAN LANBAO ELECTRICAL APPLIANCES CO LTD	TR, TB	T8A, 250VAC	IEC 60127-1 IEC 60127-3	TUV J 50420445
(Alternative)	XIAMEN SET ELECTRONICS CO LTD	SPT478	T8A, 250VAC	IEC 60127-1 IEC 60127-3	VDE 40049409
Fuse link (F2)	XC ELECTRONICS (SHENZHEN) CORP LTD	5TE	T3,15A, 250VAC	IEC 60127-1 IEC 60127-3	VDE 40029550
(Alternative)	SHENZHEN LANSON ELECTRONICS CO LTD	SMT	T3,15A, 250VAC	IEC 60127-1 IEC 60127-3	VDE 40012592
(Alternative)	DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD	932	T3,15A, 250VAC	IEC 60127-1 IEC 60127-7	TUV R 50279350

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(Alternative)	DONGGUAN CHEVRON ELECTRONIC TECHNOLOGY CO LTD	SET	T3,15A, 250VAC	IEC 60127-1 IEC 60127-3	TUV J 50426507
(Alternative)	ZHONG SHAN LANBAO ELECTRICAL APPLIANCES CO LTD	TR, TB	T3,15A, 250VAC	IEC 60127-1 IEC 60127-3	TUV J 50420445
(Alternative)	XIAMEN SET ELECTRONICS CO LTD	SPT478	T3,15A, 250VAC	IEC 60127-1 IEC 60127-3	VDE 40049409
Varistor (RV1)	Huizhou Songlong xindian Electronics Technology Co., Ltd	10D471K, 10D511K	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40040037
(Alternative)	XIAMEN SET ELECTRONICS CO LTD	MOV 10D471K, MOV 10D511K	Min. 300V, 105°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	TUV J 50254627
(Alternative)	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD	10D471K, 10D511K	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40023049
(Alternative)	Dongguan Cigu Electronic Technology Co Ltd	CIGU10D47 1K, CIGU10D51 1 K	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	TUV B 108830 0001
(Alternative)	XIAMEN SINO FAITH ELECTRONIC TECHNOLOGY CO LTD	V-471K-10, V- 511K-10	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40047368
(Alternative)	DONG GUAN CITY JIANKUN ELECTRONICS TECHNOLOGY CO LTD	10D471K, 10D511K	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40046024

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(Alternative)	HONGZHI ENTERPRISES LTD	HEL10D471K, HEL10D511K	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40037512
(Alternative)	CERGLASS MFG INC	10D471K, 10D511K	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40028836
(Alternative)	BESTBRIGHT ELECTRONICS CO LTD	471KD10, 511KD10	Min. 300V, 125°C	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40050493
Transformer (T1)	SHENZHEN HEMEIXIANG SCIENCE.T CO., LTD.	EQ2514-05-BM	Class 130	IEC 60335-1 IEC 60335-2-16	Tested with appliance
-Triple insulation wire	HUIZHOU HUAYING ELECTRONIC TECHNOLOGY CO LTD	TIW-B, TIW-F	Min. 130°C	IEC 61558-1 IEC 61558-2-16	VDE 40047994
(Alternative)	SHENZHEN DARUN SCIENCE AND TECHNOLOGY CO LTD	DRTIW-B, DRTIW-F, DRTIW-(F)	Min. 130°C	IEC 61558-1 IEC 61558-2-16	VDE 40032470
-Winding	GUANGDONG JINYAN ELECTROTECHNICS JOINT STOCK CO LTD	2UEW	130°C	UL 1446	UL E238500
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375HF	PMC, V-0, 150°C	IEC 60335-1 IEC 60335-2-16	Tested with appliance UL E59481
Y capacitor (CY1, CY2)	SHANTOU XINWEI ELECTRONIC CO., LTD	CE	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40050361
(Alternative)	SHANTOU XINWEI ELECTRONIC CO., LTD	CD	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40047774
(Alternative)	KNSCHA ELECTRONICS CO., LIMITED	JK	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40043092
(Alternative)	KNSCHA ELECTRONICS CO., LIMITED	JT	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40043090

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(Alternative)	SOUTH CHINA ELECTRONIC CO., LTD	CY	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40053818
(Alternative)	SOUTH CHINA ELECTRONIC CO., LTD	CY	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40045823
(Alternative)	DONGGUAN JYHWEI ELECTRONICS CO LTD	JY	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40049793
(Alternative)	DONGGUAN JYHWEI ELECTRONICS CO LTD	JN	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40047520
(Alternative)	Dongguan Cigu Electronic Technology Co Ltd	CE	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40043430
(Alternative)	Dongguan Cigu Electronic Technology Co Ltd	CD	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40043434
(Alternative)	DONGGUAN WEIQING ELECTRONIC CO LTD	WE	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40049864
(Alternative)	DONGGUAN WEIQING ELECTRONIC CO LTD	WD	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40050021
(Alternative)	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD	CE	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40025748
(Alternative)	DONGGUAN CITY DAFU ELECTRONIC CO LTD	CT7	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40041523
(Alternative)	DONGGUAN CITY DAFU ELECTRONIC CO LTD	CT7	2200pF, Min. 250VAC, 125°C	IEC 60384-14	VDE 40041521

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X capacitor (C3, C6, C7)	SHANTOU XINYIN ELECTRONICS TECHNOLOGY CO LTD	MPX	0,47uF (C3, C6), 0,22uF (C7), AC275V, T110	IEC 60384-14	VDE 40040448
(Alternative)	TENTA ELECTRIC INDUSTRIAL CO LTD	MEX	0,47uF (C3, C6), 0,22uF (C7), AC275V, T100	IEC 60384-14	VDE 119119
(Alternative)	Dongguan Weiqing Electronic Co., Ltd.	MPX	0,47uF (C3, C6), 0,22uF (C7), AC275V, T110	IEC 60384-14	VDE 40040406
(Alternative)	Dongguan Cigu Electronic Technology Co Ltd	MPX	0,47uF (C3, C6), 0,22uF (C7), AC275V, T110	IEC 60384-14	VDE 40050231
(Alternative)	DAIN ELECTRONICS CO LTD	MPX	0,47uF (C3, C6), 0,22uF (C7), AC275V, T100	IEC 60384-14	VDE 40018798
Optocoupler (U1)	EVERLIGHT ELECTRONICS CO LTD	EL3041, EL3022, EL3063	100°C	IEC 60747-5-5	VDE 132249
(Alternative)	LITE-ON TECHNOLOGY CORP	MOC3041, MOC3022, MOC3063	115°C	IEC 60747-5-5	VDE 40015248
(Alternative)	SHENZHEN ORIENT COMPONENTS CO LTD	ORT3041, ORT3022, MOC3063	125°C	IEC 60747-5-5	VDE 40029733
(Alternative)	FUJIAN LIGHTNING OPTOELECTRONIC CO.,LTD	TD3041, TD3022, TD3063	110°C	IEC 60747-5-5	VDE 40048885
Relay (REL1)	SHENZHEN YUANZE ELECTRIC CO LTD	Y3F-SS-124DMF, Y3F-SS-124DM	Contact: 250VAC, 10A, T105, 1E4, Coil voltage: 24VDC	IEC 61810-1 Clause 17 of IEC 60730-1	TUV R 50197243
(Alternative)	NingBo Wing Hung Electronics Technology Co. Ltd.	YYH3F-SH-124LHA	Contact: 277VAC, 10-17A, T105, 5E4, Coil voltage: 24VDC	IEC 61810-1 Clause 17 of IEC 60730-1	TUV B 101351 0005

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(Alternative)	DONGGUAN WANHUI APPLIANCES CO., LTD.	LRD-S-124DM	Contact: 250VAC, 10A, T105, 1E5, Coil voltage: 24VDC	IEC 61810-1 Clause 17 of IEC 60730-1	TUV R 50255032
Cloes-end connector	HEAVY POWER CO LTD	CE2	600V, 105°C	IEC 60335-1 IEC 60335-2-16 UL 486	Test with appliance UL E113650
Silicone terminal tube	YUEQING CHENGLING ELECTEONIC TECHNOLOGY CO LTD	DJ211-35	600V, 200°C	IEC 60335-1 IEC 60335-2-16 UL 224	Test with appliance UL E364900
(Alternative)	ZHEJIANG ZHONGTIAN ELECTRICAL JACKET CO LTD	DF187-32	600V, 200°C	UL 224	UL E206666
Silicone sleeving	FOSHAN NANHUA INSULATION MATERIA CO LTD	2753	600V, 200°C	IEC 60335-1 IEC 60335-2-16 UL 1441	Test with appliance UL E513388
(Alternative)	Jiangyin Huate Electrical Material Co Ltd	SRT-70	600V, 200°C	UL 1441	UL E482983
(Alternative)	SHENZHEN WORE HEAT-SHRINKABLE MATERIAL CO LTD	WPET	600V, 200°C	UL 1441	UL E490480
(Alternative)	DONGGUANG DAY ONGLAI NEW MATERIAL TECHNOLOGY CO LTD	DYL1500-10000	600V, 200°C	UL 1441	UL E499455
Heat shrinkable tube	GUANGZHOU KAIHENG NEW MATERIAL CO LTD	K-102	600V, 125°C	IEC 60335-1 IEC 60335-2-16 UL 224	Test with appliance UL E321827

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

28.1	TABLE: Threaded part torque test			P
Threaded part identification:	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)	
Earthing screw	3.9	II	1.2	
Supplementary information:				

29.1	TABLE: Clearances		P
	Overvoltage category	II	—

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Rated impulse voltage (V):	Min. cl (mm)	Type of insulation:				Verdict / Remark
		Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	
330	0,2* / 0,5 / 0,8**	N/A	N/A	N/A	N/A	N/A
500	0,2* / 0,5 / 0,8**	N/A	N/A	N/A	N/A	N/A
800	0,2* / 0,5 / 0,8**	N/A	N/A	N/A	N/A	N/A
1 500	0,5 / 0,8** / 1,0***	N/A	N/A	N/A	N/A	N/A
2 500	<u>1,5 / 2,0***</u>	>2.6 ¹⁾	>2.6	N/A	2.2	P
4 000	<u>3,0 / 3,5***</u>	N/A	N/A	>4.6	N/A	P
6 000	5,5 / 6,0***	N/A	N/A	N/A	N/A	N/A
8 000	8,0 / 8,5***	N/A	N/A	N/A	N/A	N/A
10 000	11,0 / 11,5***	N/A	N/A	N/A	N/A	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

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V):	Creepage distance (mm)							Type of insulation			Verdict
	Pollution degree										
	1	2			3						
		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	<u>0,56</u>	1,25	1,8	<u>2,5</u>	3,2	3,6	<u>4,0</u>	>1.3 >4.2 >5.2	—	—	P
250	0,56	1,25	1,8	<u>2,5</u>	3,2	3,6	<u>4,0</u>	—	4.2 >5.2	—	P
250	1,12	2,5	3,6	<u>5,0</u>	6,4	7,2	<u>8,0</u>	—	—	7.4 >10.4	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

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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
>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

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>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

Input to output of transformer: Measured: 7.4mm, Limit: 4.8mm

Core to output of transformer: Measured: 5.5mm, Limit: 4.8mm

The core of transformer is considered as primary parts.

29.2	TABLE: Creepage distances, functional insulation								P
Working voltage (V):	Creepage distance (mm)							Verdict / Remark	
	Pollution degree								
	1	2			3				
		Material group			Material group				
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*		
≤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 (3.3)	
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	

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>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)			≤2.0	—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)		Impression diameter (mm)
Plastic enclosure	Refer to table 24.1	75		1.0
PCB	Refer to table 24.1	125		0.8
Bobbin of T1	Refer to table 24.1	125		0.8
Supplementary information:				

30.2	TABLE: Resistance to heat and fire - Glow wire tests						P	
Object/ Part No./ Material	Manufacturer / trademark	Glow wire test (GWT); (°C)						Verdict
		550	650		750		850	
			te	ti	te	ti		
Plastic enclosure	Refer to table 24.1	X						P
Plastic bracket	Refer to table 24.1	X						P
Bobbin of T1	Refer to table 24.1				NI	NI	X	P
Connector on PCB	Refer to table 24.1				NI	NI	X	P
Motor bobbin	Refer to table 24.1				NI	NI	X	P
Fan bobbin	Refer to table 24.1		NI	NI				P
Thermal cut out	Refer to table 24.1				NI	NI	X	P
Relay	Refer to table 24.1				NI	NI	X	P
X capacitor	Refer to table 24.1				NI	NI	X	P
Plastic base of L3	Refer to table 24.1				NI	NI	X	P
Close-end connector	Refer to table 24.1				NI	NI	X	P
Silicone terminal tube	Refer to table 24.1				NI	NI	X	P
Silicone sleeving	Refer to table 24.1				NI	NI	X	P

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Heat shrinkable tube	Refer to table 24.1				NI	NI	X	P
Thermal motor protector	Refer to table 24.1				NI	NI	X	P
Varistor	Refer to table 24.1				NI	NI	X	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 [(te – ti) ≤ 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)?.....								N/A
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								

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					

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT
IEC 60335-2-9
Safety of household and similar electrical appliances
PART 2: PARTICULAR REQUIREMENTS FOR GRILLS, TOASTERS AND SIMILAR COOKING APPLIANCES

5	GENERAL CONDITIONS FOR THE TESTS		—
5.2	See Note (IEC 60335-2-9)		N/A
5.3	If it is evident from the construction of the appliance that the test of one function will produce more favourable results than another, this function is not tested. (IEC 60335-2-9)		N/A
5.6	If two or more cooking functions can be performed simultaneously, they are tested at the same time. (IEC 60335-2-9)		N/A
5.101	Induction hotplates are operated as specified for motor-operated appliances. Other appliances are tested as specified for heating appliances, even if they incorporate motors (IEC 60335-2-9)		P
	In appliances that incorporate induction hotplates in addition to other heating units, the induction hotplates are operated simultaneously and supplied separately (IEC 60335-2-9)		N/A
6	CLASSIFICATION		—
	Appliances intended for outdoor use shall be at least IPX4 (IEC 60335-2-9)		N/A
7	MARKING AND INSTRUCTIONS		—
7.1	The rated power input or rated current of induction hotplates shall also be marked. (IEC 60335-2-9)		N/A
	Appliances intended to be partially immersed in water for cleaning shall be marked with the maximum level of immersion and the substance of the following: Do not immerse beyond this level (IEC 60335-2-9)		N/A
	If appliances have accessible metal surfaces, for which temperature rise limits are specified in Table 102 and for which the provisions of footnote b to Table 102 apply, then the appliance shall be marked with symbol IEC 60417-5041(2002-10), the rules of ISO 3864-1 applying except for the specified colours, or marked with the substance of the following: CAUTION: Hot surface (IEC 60335-2-9)		N/A
	Symbol IEC 60417-5036 (2002-10) caution, hot surface (IEC 60335-2-9)		N/A
7.12	Appliance with inlet and intended to be partially or fully immersed for cleaning, instruction sheet including in substance: (IEC 60335-2-9)		N/A
	- remove connector before cleaning		N/A
	- dry appliance inlet before re-use		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	The instructions for use for appliances intended to be used with a connector incorporating a thermostat shall state that only the appropriate connector must be used (IEC 60335-2-9)		N/A
	Instructions for appliances for outdoor use: (IEC 60335-2-9)		N/A
	-The appliance is suitable for outdoor use		N/A
	-The supply cord should be regularly examined for signs of damage, and if the cord is damaged, the appliance must not be used		N/A
	-The appliance must be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA		N/A
	-The appliance is to be connected to a socket-outlet having an earthing contact (class I)		N/A
	If symbol IEC 60417-5041 (2002-10) is marked on appliances, its meaning shall be explained (IEC 60335-2-9)		N/A
	The instructions shall state that the appliances are not intended to be operated by means of an external timer or separate remote-control system (IEC 60335-2-9)		P
	The instructions shall include details on how to clean surfaces in contact with food (IEC 60335-2-9)		P
	For toasters, they shall include details on how to remove breadcrumbs, when applicable. (IEC 60335-2-9)		N/A
	For toaster: Bread may burn. Therefore toasters must not be used near or below curtains and other combustible materials, such as curtains.. (IEC 60335-2-9)		N/A
	For barbecue: WARNING: Charcoal or similar combustible fuels must not be used with this appliance. (IEC 60335-2-9)		N/A
	For barbecue intended to be used with water: Maximum quantity of water to be poured into the appliance (IEC 60335-2-9)		N/A
	For hotplates having surfaces of glass-ceramic or similar material protecting live parts : WARNING: If the surface is cracked, switch off the appliance to avoid the possibility of electric shock. (IEC 60335-2-9)		N/A
	For induction hotplates: Metallic objects such as knives, forks, spoons and lids not be placed on the hotplate since they can get hot (IEC 60335-2-9)		N/A
	For bread makers: maximum quantities of flour and raising agent that may be used (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	For candy floss appliances shall state the maximum quantities of sugar and other ingredients that may be used. (IEC 60335-2-9)		N/A
	Instructions state the substance of the following:		—
	This appliances is intended to be used in household and similar applications such as: -staff kitchen areas in shops, offices and others working environments; -farm houses; -by clients in hotels, motels and other residential type environments; -bed and breakfast type environments. (IEC 60335-2-9)		P
	If the use of the appliance is limited to less than the above, this shall be clearly stated in the instructions. (IEC 60335-2-9)		N/A
7.14	The height of the triangle used with symbol IEC 60417-5041(2002-10) shall be at least 20 mm. (IEC 60335-2-9)		N/A
7.15	The marking specified for hot surfaces shall be visible when the appliance is operated as in normal used including when actuating any switch, adjusting any control or opening a lid, door or drawer. It shall not be placed on a hot functional surface (IEC 60335-2-9)		N/A
7.101	The cooking zone of hot plates shall be identified by appropriate marking unless it is obvious (IEC 60335-2-9)		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		—
8.1.1	For toasters having a crumb tray : use of test probe 41 of IEC 61032 : no contact through crumb tray with live parts that are disconnected by double pole switch using (IEC 60335-2-9)		N/A
8.1.3	For toasters it is not necessary for the heating element switching device to provide full disconnection or meet the clearances for full disconnection specified in 20.1.5.3 of IEC 61058-1:2000 obtained from Table 22 of IEC 61058-1:2000. (IEC 60335-2-9)		N/A
9	STARTING OF MOTOR-OPERATED APPLIANCES		—
10	POWER INPUT AND CURRENT		—
10.1	Power input of induction hotplates measured separately and the tolerances for motor-operated appliances apply. (IEC 60335-2-9)		N/A
10.2	Current input of induction hotplates measured separately and the tolerances for motor-operated appliances apply (IEC 60335-2-9)		N/A
11	HEATING		—

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
11.1	Compliance for toasters is also checked by the test of 11. 101 (IEC 60335-2-9)		N/A
	Compliance for ovens, rotary grills and cookers is also checked by the test of 11.102. (IEC 60335-2-9)		N/A
	Compliance for contact grills, waffle irons, radiant grills, raclette grills, barbecues, candy floss appliances and hot plates, is also checked by the test of 11.103. (IEC 60335-2-9)		N/A
	Compliance for breadmakers, pop-corn makers, and food dehydrators is also checked by the test of 11.104. (IEC 60335-2-9)		N/A
	Compliance for roasters is also checked by the test of 11.105. (IEC 60335-2-9)		N/A
	For all other types of appliances, compliance is checked by submitting the appliance to the tests of the nearest mentioned relevant type of appliance. (IEC 60335-2-9)		N/A
11.2	Radiant grills and raclette grills that are loaded from the front, rotary grills, ovens, breadmakers, cookers and hotplates are placed with their backs as near as possible to one of the walls of the test corner and away from the other wall (IEC 60335-2-9)		N/A
	Other appliances are placed away from the walls. (IEC 60335-2-9)		P
11.3	Where the external accessible surfaces are suitably flat and access permits, then the test probe of Figure 105 is used to measure the temperature rises of external accessible surfaces specified in Table 102. The probe is applied with a force of 4 N ± 1 N to the surface in such a way that the best possible contact between the probe and the surface is ensured. (IEC 60335-2-9)		P
11.4	Breadmakers are operated as specified for combined appliances. (IEC 60335-2-9)		N/A
	If the temperature rise limits are exceeded in appliances incorporating motors, transformers or electronic circuits, and if the power input is lower than the rated power input, the test is repeated with the appliance supplied at 1,06 times rated voltage (IEC 60335-2-9)		N/A
11.6	Induction hot plates are also operated with vessels, as specified in Figure 104, containing water and covered with a lid. Controls are adjusted to their highest setting until the water boils and then adjusted so that the water simmers. Water is added to maintain the level during simmering. (IEC 60335-2-9)		N/A
11.7	Tests carried out in compliance with the paragraphs N° 1 to 13 (IEC 60335-2-9)		P
11.8	For radiant grills, rotary grills, raclette grills, hotplates and cookers, instead of 65 K, the temperature rise of the wall of the test corner shall not exceed 75 K. (IEC 60335-2-9)		N/A

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UTTR-SAF-IEC 60335-2-16-V1.0

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	When an appliance connector incorporates a thermostat, the temperature rise limit for the pins of the inlet does not apply (IEC 60335-2-9)		N/A
	The temperature rise limits of motors, transformers, components of electronic circuit and parts directly influenced by them may be exceeded when the appliance is operated at 1,15 times rated power input (IEC 60335-2-9)		N/A
	Cheese used in sandwich toasting attachments shall not flow into places where it could give rise to a hazard, such as reducing clearances or creepage distances below the values specified in Clause 29 (IEC 60335-2-9).		N/A
	The temperature rise limits for touch controls also include all surfaces within 5 mm of the touch controls, regardless of their shape. (IEC 60335-2-9)		N/A
11.101	Toasters are placed as specified in 11.2 and are operated for three cycles at rated power under normal operation (IEC 60335-2-9)		N/A
	During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102 (IEC 60335-2-9)		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
11.102	Ovens, rotary grills and cookers are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation (IEC 60335-2-9)		N/A
	Appliances are operated until steady conditions are established or for 60 min, whichever is shorter. During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N/A
	Ovens having settings higher than 240 °C are also operated at the maximum setting until steady conditions are established or for 60 min, whichever is shorter. The temperature rise limits of Table 102 for top surfaces and door or drawer surfaces are increased by 10 K.		N/A
11.103	Contact grills, waffle irons, radiant grills, raclette grills, barbecues, candy floss appliances and hot plates are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation. (IEC 60335-2-9)		N/A
	Induction hotplates and induction wok hotplates are operated at rated voltage instead of rated power input.		N/A
	During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102.		N/A
11.104	Breadmakers, pop-corn makers and food dehydrators are placed as specified in 11.2 and operated under normal operation. Pop-corn makers and food dehydrators are supplied at rated power input and breadmakers are supplied at rated voltage. During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102. (IEC 60335-2-9)		P
11.105	Roasters are placed as specified in 11.2 and are supplied at rated power input and operated under normal operation. During the test, the temperature rise of surfaces shall not exceed the values specified in Table 102. (IEC 60335-2-9)		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		—
13.1	grill incorporated in oven, oven or grill operated most unfavourable (IEC 60335-2-9)		N/A
	Induction wok hotplates are operated with the wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9)		N/A
13.2	If earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn connected to earthed metal not exceeding 0,75 mA (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn not exceeding 0,25 mA (IEC 60335-2-9)		N/A
13.3	test voltage of 1000V if earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N/A
	test voltage of 3000 V if no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N/A
14	TRANSIENT OVERVOLTAGES		—
15	MOISTURE RESISTANCE		—
15.2	Overfilling test; quantity : as specified in IEC 60335-2-9		N/A
	Ovens: 0.5l (IEC 60335-2-9)		N/A
	Hotplates and cookers : 0.5l ,15s (IEC 60335-2-9)		N/A
	For induction wok hotplates, the test is performed using the wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9)		N/A
	Hotplates incorporate a thermal control : 0.02l (IEC 60335-2-9)		N/A
	Hotplates having ventilating opening : 0.2l (IEC 60335-2-9)		N/A
	Other appliances : 0.1l/100cm ² 1min (IEC 60335-2-9)		N/A
15.101	Appliances to be partially or immersed in water for cleaning sufficiently protected against effects of immersion (IEC 60335-2-9)		N/A
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		—
16.1	For hotplates, the tests are carried out with a vessel as specified for normal operation placed on each cooking zone (IEC 60335-2-9).		N/A
	Induction wok hotplates are operated with the wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale. (IEC 60335-2-9).		N/A
16.2	If earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn connected to earthed metal not exceeding 0,75 mA (IEC 60335-2-9)		N/A
	If no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn not exceeding 0,25 mA (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
16.3	test voltage of 1250 V if earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate. (IEC 60335-2-9)		N/A
	test voltage of 3000 V if no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate. (IEC 60335-2-9)		N/A
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		—
18	ENDURANCE		—
19	ABNORMAL OPERATION		—
19.1	Tests of 19.4 and 19.5 are only applicable to: - breadmakers, - food dehydrators - the following appliances ,if they incorporate a timer or if their instructions indicate a cooking operation longer than 1h: ovens, roasters, hotplates <i>other than induction hotplates</i> , cookers, rotary grills (IEC 60335-2-9)		P
	Toasters are subjected to the tests 19.101 and 19.102 (IEC 60335-2-9)		N/A
	However, induction wok hotplates are not subjected to the test of 19.104, 19.105 and 19.107, but 19.2, 19.3 and 19.4 are not applicable. (IEC 60335-2-9)		N/A
	Induction hotplates are subjected to the tests 19.104,19.105 and 19.107 (IEC 60335-2-9)		N/A
	Induction wok hotplates are subjected to the tests 19.105 and 19.107 (IEC 60335-2-9)		N/A
	Pop-corn makers are also subjected to the test of 19.106. (IEC 60335-2-9)		N/A
19.2	Radiant grills, raclette grills that are loaded from the front , rotary grills, ovens, hotplates and cookers are placed as near as possible to the walls of the test corner..... (IEC 60335-2-9)		N/A
	They are tested empty with lids open or closed whichever is the more unfavourable. Detachable parts are in position or removed, whichever is more unfavourable..... (IEC 60335-2-9)		P
	Hotplates are operated without a vessel and with the controls adjusted to the highest setting. (IEC 60335-2-9)		N/A
	Cookers are only tested with the heating unit that results in the most unfavourable conditions, their controls adjusted to the highest setting. However ovens are operated if they do not have an indicating lamp to show when they are switched on, controls adjusted to the highest setting (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
19.4	Air-circulating fans of food dehydrators disconnected (IEC 60335-2-9)		P
19.11.2	For toasters having devices with an off position obtained by electronic disconnection, the fault conditions a) to g) are also simulated with the appliance supplied at rated voltage but with the controls switched off. (IEC 60335-2-9)		N/A
	Heating elements shall not become energized. (IEC 60335-2-9)		N/A
19.13	During the test of 19.102 and 19.103, flames from the bread inside the toaster and any smoke from the bread shall be ignored (IEC 60335-2-9)		N/A
	Temperature rise of the windings of induction hotplates not exceeding the values specified in 19.7 (IEC 60335-2-9)		N/A
	The electric strength test of induction hotplates is carried out immediately after switching off the appliance. (IEC 60335-2-9)		N/A
19.101	Toasters operated at rated power input and under normal operation, but without bread, for six cycles of operation, test repeated 500 times (IEC 60335-2-9)		N/A
	The mechanism operates satisfactorily and no sustained arcing occurs. (IEC 60335-2-9)		N/A
19.102	Toasters: test with the ejector mechanism locked (IEC 60335-2-9)		N/A
19.103	Toasters, loaded with the bread specified for normal operation, are operated at rated power input for 2 cycles with the control at maximum setting. The bread is not replaced. (IEC 60335-2-9)		N/A
19.104	Induction hotplates are supplied at rated voltage and operated with a steel disk placed on the centre of the cooking zone. The disk has a thickness of 6 mm and the smallest diameter, rounded up to the nearest centimetre, which allows the appliance to operate (IEC 60335-2-9).		N/A
19.105	Induction hotplates operated with thermal controls short-circuited or rendered inoperative in turn: The temperature rise of the oil shall not exceed 270 K (IEC 60335-2-9).		N/A
19.106	Pop-corn makers: operated under conditions of clause 11 for a period of 5 min but with the popcorn outlet blocked by means of a grid with a mesh size small enough to keep the popcorn from being ejected from the appliance (IEC 60335-2-9)		N/A
19.107	Induction hotplates are operated under the conditions of Clause 11 but with empty vessels, controls being adjusted to the highest setting. (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Induction wok hotplates are operated under the conditions of Clause 11 with an empty wok pan that is supplied by the manufacturer with the induction wok hotplate at the point of sale, controls being adjusted to the highest setting.		N/A
20	STABILITY AND MECHANICAL HAZARDS		—
20.101	Ovens having doors with a horizontal hinge at their lower edge or drawers and on which a load is likely to be placed shall have adequate stability. (IEC 60335-2-9)		N/A
21	MECHANICAL STRENGTH		—
21.1	For appliances intended for outdoor use, the impact energy is 0.7J (IEC 60335-2-9)		N/A
	Appliances incorporates visibly glowing heating elements the blows are applied to the tubes without removing any heater guards as mounted in the appliance if they are: (IEC 60335-2-9)		—
	-located at the top of the oven and accessible to test probe 41 of IEC 61032;		N/A
	-located elsewhere in the oven and accessible to test probe B of IEC 61032.		N/A
	For hotplates with surfaces of glass-ceramic or similar, three blows applied to parts surfaces not exposed to the test of 21.101, impact energy 0,7 J (IEC 60335-2-9).		N/A
21.101	Surfaces of hotplates of glass-ceramic or similar material withstand the stresses liable to occur in normal use, under test conditions as specified (IEC 60335-2-9).		N/A
22	CONSTRUCTION		—
22.24	Heating elements constructed or supported so they are unlikely to become displaced in normal use. (IEC 60335-2-9)		N/A
22.101	Radiant grills: no timer that is intended to delay the operation of a heating element (IEC 60335-2-9)		N/A
	Unless having a thermostat and being incorporated in an oven or other compartment (IEC 60335-2-9)		N/A
	Hotplates shall not incorporate a timer that is intended to delay the operation of a heating element. (IEC 60335-2-9)		N/A
22.102	Barbecue shall not be provided with bare heating elements (IEC 60335-2-9)		N/A
	Oven: heating elements with bare conductors at the top only (IEC 60335-2-9)		N/A
22.103	Oven ventilation constructed so that they do not discharge moisture or grease in such a way that clearances and creepage distances are affected (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.104	Ovens constructed so that shelves can easily slide in the supports and do not fall out of position when the sides are displaced as much as possible. (IEC 60335-2-9)		N/A
22.105	Appliances have not openings on the underside that would allow small items to penetrate and touch live parts. (IEC 60335-2-9)		P
22.106	Grills and barbecues constructed so that their heating elements are fixed in position or prevented from operating when they are not in their normal position of use. (IEC 60335-2-9)		N/A
22.107	Hotplate constructed so that heating elements are prevented from rotating about a vertical axis and are adequately supported in all positions of adjustment of their supports. (IEC 60335-2-9)		N/A
	If a heating element is clamped by a nut on a central stud, an additional means is required to prevent its rotation.		N/A
22.108	Hotplate constructed so that inadvertent operation of touch controls is unlikely if this could give rise to a hazardous situation due to spillage of liquids or damp cloth placed on the control panel, and complies with test as specified (IEC 60335-2-9)		N/A
22.109	Hotplate incorporating touch controls constructed so that at least two manual operations are requested to switch on a heating element but only one to switch it off (IEC 60335-2-9)		N/A
22.110	Induction hotplates constructed so that they can only be operated with a suitable vessel placed on the cooking zone (IEC 60335-2-9)		N/A
	Temperature rise of iron not exceeding 35K (IEC 60335-2-9)		N/A
22.111	Heating element in breadmakers located so they are not exposed to dough that they may rise over the edge of the dough container during normal use of the appliance (IEC 60335-2-9)		N/A
22.112	Reconnection of the power supply to a breadmaker after an interruption shall not result in a fire due to an extended heating period. (IEC 60335-2-9)		N/A
22.113	Toasters having an ejector mechanism shall be constructed so that they switch off automatically after the normal toasting time even if the ejector mechanism is blocked by the bread (IEC 60335-2-9)		N/A
22.114	Heating elements in candy floss appliances shall be located so that they are not exposed to sugar during normal use of the appliance (IEC 60335-2-9)		N/A
22.115	For appliances incorporating a hotplate with at least one heating unit controlled by an electronic circuit, safety shall not be impaired in the event of a fault in the electronic circuit. (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
23	INTERNAL WIRING		—
23.3	Appliance with 2 stop positions: 10000 flexings made with moving part fully opened (IEC 60335-2-9)		P
24	COMPONENTS		—
24.1.3	Switches controlling heating elements of hotplates subjected to 30 000 cycles of operation (IEC 60335-2-9)		N/A
	Switches controlling heating elements of toaster subjected to 50000 cycles of operation (IEC 60335-2-9)		N/A
24.1.4	- energy regulators for automatic action: 100 000 (IEC 60335-2-9)		N/A
	- energy regulators for manual action: 10 000 (IEC 60335-2-9)		N/A
	Self-resetting thermal cut-outs for heating elements of glass-ceramic hotplates: 100 000 (IEC 60335-2-9)		N/A
	Self-resetting thermal cut-outs for other hotplates 10 000 (IEC 60335-2-9)		N/A
24.1.5	Appliance couplers incorporating thermostats, thermal cut-outs or fuses comply with IEC 60320-1, with exceptions specified in IEC 60335-9 (IEC 60335-2-9)		N/A
	Not applicable to conditions as specified (IEC 60335-2-9)		N/A
24.101	Thermostats and energy regulators incorporating an off position: off position maintained under test conditions (IEC 60335-2-9)		N/A
	Thermostats and energy regulators incorporating an off position : no breakdown after application of 500V across the contacts not switch on as a result of variations in ambient temperature (IEC 60335-2-9)		N/A
24.102	Thermal cut-outs incorporated in food dehydrators in order to comply with 19.4 are non-self-resetting (IEC 60335-2-9)		P
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		—
25.1	Appliances incorporating an appliance inlet other than those standardized in IEC 60320-3, shall be supplied with a cord set (IEC 60335-2-9)		N/A
25.7	The supply cord of appliances intended for outdoor use shall be polychloroprene sheathed and shall not be lighter than ordinary polychloroprene sheathed flexible cord (code designation 60245 IEC 57) (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
26	TERMINALS FOR EXTERNAL CONDUCTORS		—
27	PROVISION FOR EARTHING		—
27.1	No earthing via flexible metal tubes, coiled springs and cord anchorage (IEC 60335-2-9)		P
28	SCREWS AND CONNECTIONS		—
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		—
29.2	Pollution degree 3 applies, unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance (IEC 60335-2-9)		P
29.3	Requirement not applied to the sheath of a visibly glowing heating element that is inaccessible to test probe 41 of IEC 61032 (IEC 60335-2-9)		N/A
30	RESISTANCE TO HEAT AND FIRE		—
30.1	Temperature rises occurring during the test of 19.102 are not taken into account (IEC 60335-2-9)		N/A
30.2	For breadmakers, food dehydrators, 30.2.3 applies (IEC 60335-2-9)		P
	For cookers, ovens, roasters, rotary grills if they incorporate a timer or if their instructions indicate a cooking operation longer than 1h , 30.2.3 applies (IEC 60335-2-9)		N/A
	For other appliances, 30.2.2 applies (IEC 60335-2-9)		N/A
31	RESISTANCE TO RUSTING		—
	For appliances intended for outdoor use, compliance is checked by the salt mist test, Kb of IEC 60068-2-52, severity 2 applicable (IEC 60335-2-9)		N/A
	Before the test, enclosures having a coating are scratched by means of hardened steel pin (IEC 60335-2-9)		N/A
	After the test, the appliance shall not have deteriorated to such an extent that compliance with this standard, in particular with Clauses 8 and 27, is impaired (IEC 60335-2-9)		N/A
	After the test, the coating shall not be broken and shall not have loosened from the surface (IEC 60335-2-9)		N/A
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		—
A	ANNEX A (NORMATIVE) ROUTINE TESTS		—

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES THAT ARE RECHARGED IN THE APPLIANCE		—
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		—
	The value of p in Table C.1 is 2000 (IEC 60335-2-9)		N/A
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		—
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		—
F	ANNEX F (NORMATIVE) CAPACITORS		—
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		—
H	ANNEX H (NORMATIVE) SWITCHES		—
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		—
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		—
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		—
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		—
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		—
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		—
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		—
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN TROPICAL CLIMATES		—
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		—
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		—
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 , detection of a fault/error occur before compliance with clause 19 and 22.115 is impaired (IEC 60335-2-9)		N/A

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IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 and 22.115 is impaired (IEC 60335-2-9)		N/A
S	ANNEX S (NORMATIVE) BATTERY OPERATED APPLIANCES POWERED BY BATTERIES THAT ARE NON-RECHARGEABLE OR NOT RECHARGED IN THE APPLIANCE		—
T	ANNEX T (NORMATIVE) UV-C RADIATION EFFECT ON NON-METALLIC MATERIALS		—



IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT
IEC 60335-2-14
Safety of household and similar electrical appliances
PART 2: PARTICULAR REQUIREMENTS FOR GRILLS, TOASTERS AND SIMILAR COOKING APPLIANCES

5	GENERAL CONDITIONS FOR THE TESTS		—
5.2	Addition: Three additional coffee mills and grain grinders are required for the test of 19.102. The additional test of 25.14 is carried out on a separate appliance (IEC 60335-2-14)		N/A
6	CLASSIFICATION		—
6.1	Class II or class III for hand-held kitchen machines (IEC 60335-2-14)		N/A
	Class 0 or class I if their rated voltage does not exceed 150 V (IEC 60335-2-14)		N/A
	For a class III construction with a detachable power supply part the appliance is classified according to the detachable power supply part		N/A
6.2	Protection against harmful ingress of water		N/A
7	MARKING AND INSTRUCTIONS		—
7.1	Rated power input is marked (IEC 60335-2-14)		P
	Stands provided with cordless blenders are marked with: (IEC 60335-2-14)		N/A
	- the name, trademark or identification mark of the manufacturer or responsible vendor		N/A
	- the model or type reference		N/A
7.12	Instructions include the operating times and speed settings for accessories (IEC 60335-2-14)		N/A
	Accessories, other than those supplied with the appliance, include instructions for their safe use. (IEC 60335-2-14)		N/A
	Adequate instruction for use for slicing machines provided with a base having a plain surface underneath the sliding feed table (IEC 60335-2-14)		N/A
	The instructions for food processors and blenders warn against misuse (IEC 60335-2-14)		N/A
	Be careful when handling the sharp cutting blades, emptying the bowl and during cleaning (IEC 60335-2-14)		N/A
	Be careful if hot liquid is poured into the food processor or blender as it can be ejected out of the appliance due to a sudden steaming (IEC 60335-2-14)		N/A

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UTTR-SAF-IEC 60335-2-16-V1.0

IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
	Instructions for hand-held blenders : (IEC 60335-2-14)		N/A
	- always disconnect the blender from the supply if it is left unattended and before assembling, disassembling or cleaning		N/A
	- do not allow children to use the blender without supervision		N/A
	The instructions for centrifugal juicers include the substance of the following: (IEC 60335-2-14)		N/A
	- Do not use the appliance if the rotating sieve or the protecting cover is damaged or has visible cracks (IEC 60335-2-14)		N/A
	The instructions for cordless blenders state that the blender is only to be used with the stand provided (IEC 60335-2-14)		N/A
	The blender and stand of the cordless blender can be lifted together by gripping the handle of the blender, the instructions include the substance of the following: (IEC 60335-2-14)		N/A
	CAUTION: Ensure that the blender is switched off before removing it from the stand		N/A
	The instructions include details on how to clean surfaces in contact with food (IEC 60335-2-14)		P
	The instructions for appliances incorporating a switch necessary for compliance with 22.40 include the substance of the following: (IEC 60335-2-14)		P
	Switch off the appliance and disconnect from supply before changing accessories or approaching parts that move in use		P
	Instructions for noodle makers shall include: (IEC 60335-2-14)		N/A
	- the maximum quantity of ingredients		N/A
	The instructions include the substance of the following: (IEC 60335-2-14)		P
	This appliance is intended to be used in household and similar applications such as:		P
	- staff kitchen areas in shops, offices and other working environments;		P
	- farm houses;		P
	- by clients in hotels, motels and other residential type environments;		P
	- bed and breakfast type environments.		P
	If the manufacturer wants to limit the use of the appliances to less than the above, this has to be clearly stated in the instructions (IEC 60335-2-14)		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		—

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
9	STARTING OF MOTOR-OPERATED APPLIANCES		—
10	POWER INPUT AND CURRENT		—
10.1	Except for noodle makers, a representative period is 2min or the time specified in 11.7 (whichever is shorter) (IEC 60335-2-14)		P
11	HEATING		—
11.7	The appliance is subjected to 11.7.1, 11.7.2 and if necessary 11.7.3	Test according to programme	P
11.7.1	Appliance operated for the period specified, where relevant for the number of cycles specified (11.7.101-11.7.118)		N/A
11.7.2	Appliance operated for the number of cycles specified (11.7.101-118) and using the maximum quantity of the load to be processed stated in the instructions, with the operating periods as follows:		N/A
	- for operation periods specified in the instructions not exceeding 7min, the max. period stated +1 or 7min (whichever is less)		N/A
	- for operation periods specified in the instructions exceeding 7 min, the max. period stated in the instructions		N/A
11.7.3	If none of the power inputs used for the tests in 11.7.1 or 11.7.2 are		N/A
	- > 80% of rated power input for rated input <=300W		N/A
	- > rated power input - 60W for rated input between 300 and 400W		N/A
	- >85% of rated power input for rated input >400W		N/A
	Rated power input obtained by applying a constant torque to the appliance placed in its normal position without imbalance forces greater than in normal use. Operation with the relevant time period(11.7.101-118)		N/A
11.7.101	Bean slicers, churns, sieving machines and slicing machines are operated for 30 min		N/A
11.7.102	Berry juice extractors and mincers are operated for 15min		N/A
11.7.103	Blenders that have to be kept switched on by hand and hand-held blenders are operated for 1 min with the control adjusted to the highest setting. The operation is carried out five times with rest periods of 1 min during which the mixture is replaced		N/A
	Other blenders, the period of operation is 3 min, the operation being carried out 10 times		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
11.7.104	Can openers are operated until the can is fully open. This operation is carried out five times with rest periods of 15 s		N/A
11.7.105	Juicers having separate outlets for the juice and residue are operated are operated for 15min		N/A
	Other juicers are operated for 2min.(10x with rest periods of 2min)		N/A
11.7.106	Cheese graters are operated until the cheese is grated		N/A
11.7.107	Citrus-fruit squeezers are operated for 15 s during which two halves of fruit are squeezed. The operation is carried out 10 times with rest periods of 15 s		N/A
11.7.108	Coffee mills having a separate container for collecting the ground coffee are operated until the container is full, unless the hopper is emptied first. This operation is carried out twice with a rest period of 1 min		N/A
	Other coffee mills are operated until the coffee beans are completely ground or for 30 s if this is longer. The operation is carried out three times with rest periods of 1 min		N/A
11.7.109	Cream whippers and egg beaters are operated for 10 min with the control adjusted to the highest setting		N/A
11.7.110	Food mixers with beaters for mixing cake batter are operated for 15 min unless they incorporate a biased-off switch, in which case they are operated for 5 min		N/A
	Food mixers with kneaders for mixing yeast dough are operated for – 5 min for hand-held food mixers; – 10 min for other food mixers		N/A
11.7.111	Food processors are operated with the setting of the control and for the period stated in the instructions for mixing yeast dough		N/A
	If instructions for mixing yeast dough are not provided, the food processor is operated under the most unfavourable conditions stated in the instructions		N/A
11.7.112	Grain grinders are operated until 1 kg of wheat has been ground		N/A
11.7.113	Ice-cream machines for use in refrigerators and freezers are operated for 5 min, after which the stirrer is stalled for 25 min		N/A
	Other ice-cream machines are operated for 30 min		N/A
11.7.114	Knife sharpeners are operated for 10 min		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
11.7.115	Knives are operated for 15 min		N/A
11.7.116	Potato peelers of the container type are operated until the potatoes are adequately peeled. Potatoes may be peeled in more than one batch. Peeling periods are separated by rest periods of 2 min		N/A
	Hand-held potato peelers are operated for 10 min		N/A
11.7.117	Shredders and vegetable graters are operated until a batch of carrots is shredded. The operation is carried out five times with rest periods of 2 min		N/A
11.7.118	Noodle makers: - without a mixing function operated for 15 min - with a mixing function, are operated 2 times (or sufficient number of times to process 1kg flour) whichever takes longer; rest period is 2min		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		—
14	TRANSIENT OVERVOLTAGES		—
15	MOISTURE RESISTANCE		—
15.2	Appliances supplied at rated voltage and operated for 15 s with the solution still in the container: the leakage current shall not exceed the values specified in clause 13. (IEC 60335-2-14)		N/A
	Saline solution is then added to the liquid container until it is completely full again. A further quantity equal to 15% of the capacity of the container or 0.25 l is poured in steadily over a period of 1 min: (IEC 60335-2-14)		N/A
	Water outlets for potato peelers are blocked (IEC 60335-2-14)		N/A
	For cordless blenders, the test is carried out on a horizontal surface with the blender both on and off its stand (IEC 60335-2-14)		N/A
15.101	Connecting devices of stands for cordless blenders are not affected by water (IEC 60335-2-14)		N/A
	Compliance is checked by the following test		N/A
	The stand withstands the dielectric strength test of 16.3		N/A
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		—
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		—
18	ENDURANCE		—
19	ABNORMAL OPERATION		—

IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
19.1	Test of 19.7 only applicable to coffee mills, grain grinders, berry-juice extractors, food blenders, centrifugal juicers, churns, food mixers, food processors, ice-cream machines, mincers, and noodle makers (IEC 60335-2-14)		N/A
	Coffee mills and grain grinders subjected to the tests of 19.101, and to 19.102 unless they have to be kept switched on by hand (IEC 60335-2-14)		N/A
	Noodle makers with a mixing function are also subjected to the test of 19.103 (IEC 60335-2-14)		N/A
19.7	Coffee mills and grain grinders that have to be kept switched on by hand, berry-juice extractors, food blenders, centrifugal juicers for fruit and vegetables, food mixers, food processors, and mincers are operated for 30 s (IEC 60335-2-14)		N/A
	Noodle makers are tested for 5 min (IEC 60335-2-14)		N/A
	Churns and ice-cream machines are operated until steady conditions are established (IEC 60335-2-14)		N/A
19.10	Test repeated with accessories in position but without additional load (IEC 60335-2-14)		N/A
	Coffee mills and grain grinders are only tested for 30 s (IEC 60335-2-14)		N/A
19.11.2	Appliances having a device with an off position obtained by electronic disconnection, or a device that can place the appliance in a stand-by mode, are turned off or placed in the stand-by mode and supplied at rated voltage (IEC 60335-2-14)		P
19.13	Appliances tested with an electronic switch in the off position, or in the stand-by mode: (IEC 60335-2-14)		P
	- not become operational, or		N/A
	- if they become operational, not result in a dangerous malfunction during or after the tests of 19.11.2		P
19.101	Coffee mills and grain grinders are supplied at rated voltage and operated under normal operation five times with rest periods. (IEC 60335-2-14)		N/A
19.102	Coffee mills and grain grinders subjected to the test as specified in IEC 60335-2-14 and carried out on three additional appliances. (IEC 60335-2-14)		N/A
	If any of the motors stall, original appliance subjected to the test of 19.7		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
19.103	Noodle makers with a mixing function are fed with the maximum quantity of flour stated in the instruction and no water, and then operated for one operating cycle. During the test, 19.13 is applicable and the winding temperatures shall not exceed the values specified in 19.9		N/A
20	STABILITY AND MECHANICAL HAZARDS		—
20.2	Detachable accessories are removed and covers are opened except that for : (IEC 60335-2-14)		P
	- centrifugal juicers, the cover and the container for collecting the residue are in position		N/A
	- graters and shredders, this is only applicable to accessories that are removed while the appliance is in operation		N/A
	Test probe not applied to: (IEC 60335-2-14)		N/A
	- appliances specified in the list		N/A
	- the following parts of other appliances:		N/A
	<ul style="list-style-type: none"> smooth shafts having a diameter not exceeding 8 mm, rotating at a speed not exceeding 1 500 r/min and driven by motors having an input not exceeding 200 W 		N/A
	<ul style="list-style-type: none"> outlet sides of grating and shredding disks rotating at a speed not exceeding 1 500 r/min 		N/A
	<ul style="list-style-type: none"> projections from the surface of grinding disks, cones and similar parts having a height less than 4 mm 		N/A
	<ul style="list-style-type: none"> Grinding screws with a projection having a height less than 4 mm and complying with all shown in Figure 104, and the grinding screw profile shall not have sharp edges. 		N/A
	Test probe not applied to feed openings having a throat with following dimensions: (IEC 60335-2-14)		N/A
	- a height of at least 100 mm, measured from the upper edge of the cutting blade		N/A
	- an average of the maximum and minimum cross-sectional dimensions of the feed opening that does not exceed 65.5 mm		N/A
	- a maximum cross-sectional dimension of the feed opening that does not exceed 76 mm		N/A
	For blenders, detachable parts, except lids, are not removed. Test carried out with a test probe similar to that of test probe B of IEC 61032 but with circular stop face as specified. (IEC 60335-2-14)		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
20.101	Accessories for cream whippers, egg beaters and hand-held food mixers have no knife edges, unless a suitable guard prevents accidental contact with their rotating parts (IEC 60335-2-14)		N/A
	Hand-held food mixer: not possible to release the working tools while rotating at a speed exceeding 1500 r/min (IEC 60335-2-14)		N/A
	If compliance relies on the operation of an electronic circuit the appliances is further tested as follows: (IEC 60335-2-14)		N/A
	a) The appliance is supplied at rated voltage and operated under normal operation		N/A
	The electromagnetic phenomena tests of 19.11.4.2 and 19.11.4.5 are applied		N/A
	Beaters, kneaders and similar accessories of hand-held food mixers not be released or be capable of being released by a single action during or after, as appropriate, the electromagnetic phenomena application		N/A
	b) The appliance is supplied at rated voltage and operated under normal operation		N/A
	The fault conditions in a) to g) of 19.11.2 are applied one at a time to the electronic circuit monitoring the release mechanism		N/A
	Beaters, kneaders and similar accessories of hand-held food mixers not be released or be capable of being released by a single action during the test		N/A
	If the electronic circuit is programmable, the software contain measures to control the fault/error conditions specified in Table R.1 and is evaluated in accordance with the relevant requirements of Annex R (IEC 60335-2-14)		N/A
20.102	Blades of hand-held blenders are completely screened from above and are not able to touch a flat surface while rotating (IEC 60335-2-14)		N/A
	Not possible to touch the blades with the end of the test rod (diameter 8 mm) and checked by inspection		N/A
20.103	Biased-off switch of hand-held blenders recessed or otherwise guarded: Test with a cylindrical rod having a diameter of 40 mm and hemispherical end: appliance does not operate. (IEC 60335-2-14)		N/A
20.104	Not possible to operate the cutting blades of blenders, other than hand-held blenders, while they are accessible: test with test finger specified for blender. (IEC 60335-2-14)		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
	With detachable parts removed, if the cutting blades of the blender can be touched with the test probe specified for blenders in 20.2, it shall not be possible to operate the appliance		N/A
	Switches, other than biased-off switches, are placed in the on position and two simultaneous or sequential applications of test probe B of IEC 61032 are applied to biased-off switches, including interlock switches, with a force not exceeding 20 N in an attempt to operate the cutting blades		N/A
	During the test, it shall not be possible to operate the appliance		N/A
20.105	Centrifugal juicers (IEC 60335-2-14)		N/A
	- lids and covers do not open due to vibration		N/A
	- rotating parts adequately secured against becoming loose during operation		N/A
	- If speed of rotating parts >5000rev/min: lids and covers can only be closed after removal of tools		N/A
	- teeth of grating disks do not exceed 1,5mm in height		N/A
	- Ejectors on filter drums shall not project by more than 4 mm.		N/A
	- feed pusher provided, of a size that fills the throat of the hopper		N/A
	- lids and covers do not open by force test of 5N		N/A
20.106	For appliances having a feed screw: (IEC 60335-2-14)		N/A
	- the maximum cross-sectional dimension of the hopper not exceed 45 mm		N/A
	- provide a feed pusher and the feed screw of the appliance is not accessible to test probe B of IEC 61032 with the pusher in position (IEC 60335-2-14)		N/A
	These requirements are not appliance to grinding screws for which the test probe is not applied in 20.2		N/A
20.107	Slicing machines, other than fixed appliances and those having a biased-off switch, incorporate means to hold the appliance in place and allow it to be released after use: no move on glass plate when subjected to test as specified (IEC 60335-2-14)		N/A
20.108	slicing machines: (IEC 60335-2-14)		N/A
	- provided with a guard surrounding the knife and its edge		N/A
	- guard opening as small as permitted by effective use		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
	- edge of knife guarded as shown in Fig.101		N/A
	Knife guards shall be non-detachable unless the motor cannot be switched on after their removal		N/A
	It shall not be possible to operate interlocks by means of test probe B of IEC 61032		N/A
	Angle of the upper part of guard opening not exceed 75°		N/A
	The angle may be increased to 90° if the exposed part of the knife exceeding 75° is screened from above		N/A
	Radial distance not exceed 2 mm, if the guard is flush with the plane of the knife; or		N/A
	3 mm, if the guard projects at least 0,2 mm beyond the plane of the knife		N/A
	Distance between the outer circumference of the knife and the plate that sets the thickness of the slices shall not exceed 6 mm		N/A
	Distance between the plate that sets the thickness of the slices and any other protecting part shall not exceed 5 mm		N/A
	Additional guard provided if slices thicker than 15mm allowed		N/A
	Slicing machines shall incorporate a sliding feed table with a hand rest, a thumb guard and a piece holder		N/A
	Sliding feed table adequately designed (f ₃₀ mm, d _± 5mm, thumb guard projects radially by at least 8mm beyond the blades)		N/A
	Piece holder enables small pieces to be sliced		N/A
	Dimensions of spikes or similar as specified		N/A
	Support of sliding table not usable for supplying food without the table in position; verified dash Nos		N/A
20.109	Slicing machines constructed so that accidental operation of the appliance is prevented (IEC 60335-2-14)		N/A
	Actuating member of push-button, toggle, rocker or slide switch recessed and actuated with force at least 2N		N/A
	Actuating member of slide switch located so that unintentional actuation is unlikely and actuated with force at least 5N		N/A
20.110	The cutting blades of bean slicers: (IEC 60335-2-14)		N/A
	- are at least 30 mm from the plane of the inlet opening		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
	- length of the major and minor axis of the inlet and outlet openings not exceed 30 mm and 15 mm		N/A
	- dimensions of outlet openings not limited if compliance with test specified		N/A
20.111	The rotating parts of blenders, graters and shredders: - are secured so that they are not liable to become loose during operation (IEC 60335-2-14)		N/A
	- a feed pusher shall be provided which fills the throat of the hopper		N/A
20.112	The cutting blade of food processors stopped within 1,5 s after the lid has been opened or removed (IEC 60335-2-14)		N/A
20.113	The lid interlock of food processors shall be constructed so that accidental operation of the appliances is prevented (IEC 60335-2-14)		N/A
	Lid interlock switches shall be biased-off switches		N/A
	If there is an interlock between the lid and the main switch, the lid shall be locked when the switch is in the on position		N/A
	When the lid is not correctly closed , the switch shall be locked in the off position		N/A
20.114	Access to dangerous moving parts of food processors prevented for all combinations of assembly of detachable parts that allow may occur in use: comply with test as specified (IEC 60335-2-14)		N/A
	Detachable parts are removed or assembled incorrectly in a manner that may occur in use, such as the incorrect location or misalignment of the parts		N/A
	A force not exceeding 5 N is applied to the parts in any direction and it shall not be possible to touch dangerous moving parts with test probe B of IEC 61032		N/A
20.115	Knives shall incorporate a biased-off switch that is recessed or guarded to prevent accidental operation (IEC 60335-2-14)		N/A
	Appliance don't operate when applying a cylindrical rod with diameter 40mm to the switch		N/A
20.116	Centrifugal juicers for fruit and vegetables shall be constructed so that parts cannot become disengaged when the appliance is operated at high speed (IEC 60335-2-14)		N/A
	Lid removed, appliance supply at rated voltage and highest speed (10 times): no part of appliance disengaged		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Lid in position, when the speed reaches its maximum value, attempt is made to remove the lid (10 times): no part of appliance disengaged		N/A
20.117	Centrifugal juicers shall withstand the stresses resulting from parts rotating at high speed (IEC 60335-2-14)		N/A
	Compliance is checked by the following test that is carried out on three new appliances		N/A
	and by testing the sieve in accordance with Annex AA (IEC 60335-2-14)		N/A
	The rim of plastic material retaining the rotating sieve is cut		N/A
	If the sieve retains its structure, the rim is cut further and the test repeated until disintegration takes place		N/A
	During the test, parts shall not be ejected from the appliance		N/A
20.118	The operation of cordless appliances incorporating cutting blades that are accessible to test probe B of IEC 61032 shall require two separate movements, unless (IEC 60335-2-14)		N/A
	The control device is not directly accessible to the probe		N/A
20.119	Bowl and cutting blades of food blenders and hand-held blenders shall have adequate mechanical strength (IEC 60335-2-14)		N/A
	After the test, the bowl and cutting blades shall not be broken		N/A
21	MECHANICAL STRENGTH		—
21.1	Test also carried out on detachable parts that are necessary for protection against mechanical hazards (IEC 60335-2-14)		N/A
22	CONSTRUCTION		—
22.101	Appliances constructed so that lubricants are prevented from polluting food compartments (IEC 60335-2-14)		N/A
22.102	Appliances constructed so that food or liquids are prevented from penetrating into places that could cause electrical or mechanical faults (IEC 60335-2-14)		P
22.103	The appliance coupler of cordless blenders shall be constructed to withstand the stresses occurring during normal use (IEC 60335-2-14)		N/A

IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
	The two live pins of the blender are connected together and an external resistive load is connected in series with the supply. The external load is such that the current is 1,1 times rated current		N/A
	The blender is placed on its stand and withdrawn 10 000 times at a rate of approximately 10 times per minute. The test is continued for a further 10 000 times without current flowing		N/A
	If the connection contacts cannot be energized when making or breaking the connection, instead of the above sequence, the test is carried out 20 000 times without current		N/A
	After the test, the blender shall be suitable for further use and compliance with 8.1, 16.3, 27.5 and Clause 29 shall not be impaired		N/A
22.104	Knife sharpeners shall be constructed so that knife blades are prevented from penetrating into areas that could cause an electrical or mechanical hazard (IEC 60335-2-14)		N/A
	Test probe D of IEC 61032 is inserted in any position through openings intended for sharpening		N/A
	It is not possible to touch live parts, electrical insulation or moving parts, other than a grinding wheel		N/A
23	INTERNAL WIRING		—
24	COMPONENTS		—
24.1.3	Switches incorporated in the following appliances are tested for 3 000 cycles of operation: (IEC 60335-2-14)		P
	- bean slicers;		N/A
	- liquid blenders;		N/A
	- cheese graters;		N/A
	- graters;		N/A
	- ice-cream machines for use in refrigerators and freezers;		N/A
	- sieving machines;		P
	- shredders		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		—
25.1	Ice-cream machines for use in refrigerators and freezers and hand-held appliances: no appliance inlet (IEC 60335-2-14)		N/A
25.5	Type Z attachment allowed for : (IEC 60335-2-14)		N/A
	- can openers		N/A

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
	- coffee mills and grain grinders having a mass not exceeding 1.5 kg		N/A
	- cream whippers		N/A
	- egg beaters		N/A
	- ice-cream machines including those for use in refrigerators and freezers		N/A
	- knife sharpeners		N/A
	Type X attachments, other than those with a specially prepared cord, not used for ice-cream machines for use in refrigerators and freezers (IEC 60335-2-14)		N/A
25.7	Polyvinyl chloride sheathed supply cords of ice-cream machines for use in refrigerators and freezers are resistant to low temperatures: comply with tests 4.2 and 4.3 of IEC 60811-504:2012, and 4.2 of IEC 60881-505:2012 carried out at a temperature of $-25\text{ °C} \pm 2\text{ °C}$ (IEC 60335-2-14)		N/A
25.14	Hand-held blenders and hand-held mixers subjected to 2000 flexings as specified in IEC 60335-2-14, while mounted on an apparatus similar to that of Figure 8 (IEC 60335-2-14)		N/A
25.22	- located so that pollution by food or liquid is unlikely to occur during normal use (IEC 60335-2-14)		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		—
27	PROVISION FOR EARTHING		—
28	SCREWS AND CONNECTIONS		—
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		—
29.2	Microenvironment is pollution degree 3 (IEC 60335-2-14)		P
	unless insulation enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance (IEC 60335-2-14)		N/A
30	RESISTANCE TO HEAT AND FIRE		—
30.1	For ice-cream machines for use in refrigerators and freezers, temperature of 40 °C instead of 10 °C (IEC 60335-2-14)		N/A
	Parts of non-metallic material resistant to ignition and spread of fire		N/A
30.2	For churns and ice-cream machines, 30.2.3 is applicable (IEC 60335-2-14)		N/A
31	RESISTANCE TO RUSTING		—
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		—

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		—
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES THAT ARE RECHARGED IN THE APPLIANCE		—
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		—
	The value of p in Table C.1 is 2 000, (IEC 60335-2-14)		N/A
	except for the following appliances for which it is 500: bean slicers, blenders, can openers, cheese graters, citrus-fruit squeezers, graters, ice-cream machines for use in refrigerators and freezers, knife sharpeners, knives, sieving machines, shredders (IEC 60335-2-14)		N/A
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		—
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		—
F	ANNEX F (NORMATIVE) CAPACITORS		—
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		—
H	ANNEX H (NORMATIVE) SWITCHES		—
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		—
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		—
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		—
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		—
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		—
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		—
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		—
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		—
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		—

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IEC 60335-2-14			
Clause	Requirement + Test	Result - Remark	Verdict
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		—
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 and 20.101 is impaired (IEC 60335-2-14)		N/A
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 and 20.101 is impaired (IEC 60335-2-14)		N/A
S	ANNEX S (NORMATIVE) BATTERY OPERATED APPLIANCES POWERED BY BATTERIES THAT ARE NON-RECHARGEABLE OR NOT RECHARGED IN THE APPLIANCE		—
T	ANNEX T (NORMATIVE) UV-C RADIATION EFFECT ON NON-METALLIC MATERIALS		—

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Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60335-1:2010, IEC 60335-1:2010/AMD1:2013, IEC 60335-1:2010/AMD2:2016 IEC 60335-2-14:2016, IEC 60335-2-14:2016/AMD1:2019 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Household and similar electrical appliances – Safety – Part 2-14: Particular requirements for kitchen machines			
Differences according to	EN IEC 60335-2-14:2023 + A1:2023 + A11:2023 used in conjunction with EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 + A16:2023 EN 62233:2008		
TRF template used.....	IECEE OD-2020-F2:2022, Ed. 1.2		
Attachment Form No.	EU_GD_IEC60335_2_14Y		
Attachment Originator.....	Nemko Group AS		
Master Attachment	2024-07-05		
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	CENELEC COMMON MODIFICATIONS (EN)		—
6.1	Delete “class 0” and “class 01”		N/A
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
	The lid or guards of blenders, slicers and centrifugal juicers marked with the symbol ISO 7000-0790(2004-01) (EN 60335-2-14/A11)		P
7.12	The instructions for appliances warn of potential injury from misuse.....(EN 60335-2-14/A11)		P
	The instructions for appliances include the substance of the following: (EN 60335-2-14/A11)		—
	Always disconnect the appliance from the supply if it is left unattended and before assembling, disassembling or cleaning. ...(EN 60335-2-14/A11)		P
	The instructions for bean slicers, berry-juice extractors, blenders and hand-held blenders churns, centrifugal juicers, coffee mills, food mixers, food processors, grain grinders, knife sharpeners, knives, mincers, noodle makers, potato peelers, shredders, sieving machines and slicing machines include the substance of the following: (EN 60335-2-14/A11)		—
	This appliance shall not be used by children. Keep the appliance and its cord out of reach of children (EN 60335-2-14/A11)		P
	The instructions for can openers, citrus-fruit squeezers, cream whippers, egg beaters, graters and ice-cream machines include the substance of the following: EN 60335-2-14/A11)		—

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Clause	Requirement + Test	Result - Remark	Verdict
	This appliance can be used by children aged from 8 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved (EN 60335-2-14/A11)		N/A
	Cleaning and user maintenance shall not be made by children unless they are aged from 8 years and above and supervised (EN 60335-2-14/A11)		N/A
	Keep the appliance and its cord out of reach of children aged less than 8 years (EN 60335-2-14/A11)		N/A
	The instructions also include the substance of the following: (EN 60335-2-14/A11)		—
	Appliances can be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved.....(EN 60335-2-14/A11)		P
	Children shall not play with the appliance (EN 60335-2-14/A11)		P
	The instructions for blenders include the substance of the following: (EN 60335-2-14/A11)		—
	WARNING — Always operate the blender with the lid or the guard in position as indicated in the instructions. (EN 60335-2-14/A11)		N/A
	Never put a hand in the jar when it is placed on the base unit. (EN 60335-2-14/A11)		N/A
	If food needs to be pushed down, use a suitable tool e.g. spatula. (EN 60335-2-14/A11)		N/A
	In the Part 1, delete the third and fourth paragraphs starting with “The instructions shall include the substance of the following:...” up to “... shall not be made by children without supervision”. (EN 60335-2-14/A11)		N/A
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test, except that		P
	appliances normally used on the floor and having a mass exceeding 40 kg are not tilted		N/A
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.1.3	Instead of test probe B, test probe 18 and test probe 13, for appliances other than those of class II, test probe 41 of IEC 61032 is applied with a force not exceeding 1 N to live parts of visibly glowing heating elements, all poles of which can be disconnected by a single switching action		N/A
8.2	Compliance is checked by inspection and by applying the test probes of EN 61032 in accordance with the conditions specified in 8.1.1		P
	Test probe B and probe 18 of EN 61032 are applied to built-in appliances and fixed appliances only after installation		N/A
11.8	During the test, the temperature rises are monitored continuously and do not exceed the values shown in Table 3 and Table Z101". (EN 60335-2-14/A11)		P
	Footnotes to "External enclosure of motor-operated appliances" to be taken into account (EN 60335-2-14/A11)		N/A
	Add the following Table Z101 (EN 60335-2-14/A11)		P
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling		N/A
20.2	- blenders, the lid is kept closed or the guard is not removed, if the lid or guard complies with the test specification of 22.12 or if two separate movements (e.g. turning and then pulling) are needed to open or to remove it. (EN 60335-2-14/A11)		N/A
	When using a test probe similar to test probe B of EN 61032, having a circular stop face and applied with a force of 5N, the accessories and detachable covers are removed		P
	When using test probe 18 it is applied with a force of 2,5N on the appliance fully assembled		P
	The test probe, similar to test probe B but having a circular stop face with a diameter of 50 mm, is not applied to: (EN 60335-2-14/A11)		—
	- appliances specified in the list (EN 60335-2-14/A11)		N/A
	- the following parts of other appliances: (EN 60335-2-14/A11)		N/A
	smooth shafts having a diameter not exceeding 8 mm, rotating at a speed not exceeding 1 500 r/min and driven by motors having an input not exceeding 200 W (EN 60335-2-14/A11)		N/A
	outlet sides of grating and shredding disks rotating at a speed not exceeding 1 500 r/min (EN 60335-2-14/A11)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	projections from the surface of grinding disks, cones and similar parts having a height less than 4 mm (EN 60335-2-14/A11)		N/A
	grinding screws with a projection having a height less than 4 mm and complying with all of the following: (EN 60335-2-14/A11)		N/A
	- the distance (shown as "S" in Figure 104) between the grinding screw outer circumference (top of projection, shown as "B" in Figure 104) and the inner wall of the feed screw housing (shown as "C" in Figure 104) be maximum 1 mm; (EN 60335-2-14/A11)		N/A
	- the radius corner of the inner wall of the feed opening to the screw housing is less than 2 mm (shown as "R2" in Figure 104); (EN 60335-2-14/A11)		N/A
	- the grinding screw profile not have sharp edges; (EN 60335-2-14/A11)		N/A
	- the position of the inner wall of the feed opening in the direction of rotation (shown as "W" in Figure 104) be located at a distance equal to or smaller than 0,75 times the grinding screw radius including its threads (shown as "R1" in Figure 104) measured from the grinding screw middle point. (EN 60335-2-14/A11)		N/A
	Test probe 18 not applied to: (EN 60335-2-14/A11)		—
	- appliances specified in the list (EN 60335-2-14/A11)		N/A
	- The test probes are not applied to feed openings having the following dimensions: (EN 60335-2-14/A11)		N/A
	a height of at least 100 mm, measured from the upper edge of the cutting blade; (EN 60335-2-14/A11)		N/A
	An average of the maximum and minimum cross-sectional dimensions of the feed opening that does not exceed 65,5 mm; (EN 60335-2-14/A11)		N/A
	a maximum cross-sectional dimension of the feed opening that does not exceed 76 mm. (EN 60335-2-14/A11)		N/A
	Blender jars except jars having a lid interlock have the following dimensions: (EN 60335-2-14/A11)		N/A
	opening with maximum cross-section of 125 mm measured at the level of the lower edge of the lid; and (EN 60335-2-14/A11)		N/A
	minimum distance between upper jar edge and upper blade edge of 125 mm. (EN 60335-2-14/A11)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
20.104	With detachable parts removed, if the cutting blades of the blender can be touched with the test probe B, it not be possible to operate the appliance. (EN 60335-2-14/A11)		P
	Lids or guards complying with test specification in 22.12 or for which two separate movements (e.g. turning and then pulling) are needed for their opening or removing, are not considered to be detachable parts in this subclause. (EN 60335-2-14/A11)		N/A
20.113	The lid interlock of food processors and blenders be constructed so that accidental operation of the appliance is prevented. (EN 60335-2-14/A11)		P
20.114	Access to hazardous moving parts of blenders with a lid interlock be prevented for all combinations of assembly of detachable parts that may occur in use. (EN 60335-2-14/A11)		N/A
20.Z101	Blenders which can operate without a lid in position constructed so that accidental operation of the appliance is prevented. (EN 60335-2-14/A11)		N/A
	The actuating member recessed or otherwise guarded to prevent accidental operation. (EN 60335-2-14/A11)		N/A
	The appliance do not operate. (EN 60335-2-14/A11)		N/A
21.Z101	Drop test for hand-held appliances (EN 60335-2-14/A11)		N/A
	The appliance not damaged to such an extent that compliance with this standard, in particular with Clauses 8 and 29, is impaired (EN 60335-2-14/A11)		N/A
22.12	Other parts intended to be detached during use, maintenance or cleaning (e.g. batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers		P
22.17	The requirement is not applicable to built-in appliances		N/A
22.44	An appliance is child-appealing if one of the following criteria is present:		—
	- appliance decorated using faces, cartoon like characters, or similar images		N/A
	- appliance using shapes representing animals, characters, persons or scale models		N/A
	An appliance is child-appealing if more than one of the following criteria are present:		—
	- using non-functional light (functional light is e.g. illumination of an object or area, signal indicating status of an appliance)		N/A
	- using non-functional sound (e.g. music)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- using non-functional movement		N/A
	If the appliance is child-appealing and		—
	- has a mass less than 4 kg, and		N/A
	- is mounted or normally intended for use at a height less than 850 mm,		N/A
	the following conditions are met:		N/A
	- surface temperature rise requirements not exceeded		N/A
	- hazardous moving parts not accessible		N/A
	- live parts not accessible		N/A
	- liquid temperature requirement not exceeded,		N/A
	unless for vessels in which two independent and sequential actions are needed to access the liquid		N/A
	- the requirement of 22.12 is applicable for all accessible parts of the appliance		N/A
24.1	Components comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply		P
	Motors are not required to comply with EN 60034-1, but tested as part of the appliance according to this standard		P
	Relays are tested as part of the appliance according to this standard		N/A
	Relays may be alternatively tested to EN 60730-1 and the additional requirements in EN 60335-1		N/A
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance		P
	Components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P
	Components that have not been tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard		P
	Components that have been tested and shown to comply with the resistance to fire requirements in the EN standard for the relevant component need not be retested provided that:		—
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		P
	- the test report for the component states the values of t_e and t_i acc. to EN 60695-2-11		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If the above two conditions are not satisfied, the component is tested as part of the appliance		P
	Power electronic converter circuits are not required to comply with EN 62477-1, but tested as part of the appliance according to this standard		N/A
	Unless components have been tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components that have not been tested and found to comply with the relevant EN standard, and		P
	components that are not marked or not used in accordance with their marking,		P
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		P
	Lamp-holders and starter-holders that have not been tested and found to comply with the relevant EN standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance		N/A
	Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		P
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard		P
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		N/A
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if		P
	direct supply to these parts from the supply mains gives rise to a hazard		N/A
	For plugs used in CENELEC countries Annex ZH applies		P
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
25.1	Plugs and pins for insertion into socket outlets follow the relevant standards sheets in Annex ZH		P
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors, or		N/A
	when they are liable to be exposed to significant amount of ultraviolet radiation		N/A
25.25	Instead of IEC/TR 60083, dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are in accordance with the dimensions of the relevant plug standard		N/A
	Common plugs and socket-outlets types in CENELEC countries as shown in Annex ZH		N/A
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position,		P
	unless they are held in place near the terminals independently of the solder		N/A
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N/A
32	Compliance regarding electromagnetic fields is checked according to EN 62233		P
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		N/A
	The duration of any of the tests is as specified in 19.7		N/A
ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS (EN)		—
	Denmark, Sweden, Norway and Finland		
7.12.8	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Norway		
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
	Norway		
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Denmark		
22.47	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Ireland, United Kingdom and Cyprus		
25.8	In the table, the line >10 A and ≤16 A is replaced with:		—
	> 10 and ≤ 13 1,25 (1,0) ^p		N/A
	> 13 and ≤ 16 1,5 (1,0) ^p		N/A
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		—
	Ireland		
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		N/A
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		N/A
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		—
	List of IEC and CENELEC code designations for flexible cords		P
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE		—

Clause	Requirement + Test	Result - Remark	Verdict
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative	For household use	N/A
	Model or type reference.....		N/A
	Serial number, if any		N/A
	Production year		N/A
	Designation of the appliance		N/A
7.12	Instructions provided with the appliance so that the appliance can be used safely		N/A
	The instructions contain at least the following information:		—
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		N/A
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		N/A
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		N/A
	- the general description of the appliance, when needed due to the complexity of the appliance		N/A
	- specific precautions required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving		N/A
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		N/A
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		N/A
	The words “Original instructions” appear on the language version(s) verified by the manufacturer or by the authorized representative		N/A
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence “Translation of the original instructions” appear in the relevant instructions delivered with the appliance		N/A
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand		N/A
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures		N/A
7.12.ZE1	If needed for specific appliances, the following information to be given:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts		N/A
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
	- on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided		N/A
	- on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance		N/A
	- on the specifications on the spare parts to be used, when these affect the health and safety of the operator		N/A
	- on airborne noise emissions, determined and declared in accordance with the relevant Part 2, which includes:		—
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A)..... ;		N/A
	- where this level does not exceed 70 dB(A), this fact is indicated		N/A
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 µPa)		N/A
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A)		N/A
7.12.ZE2	The instructions include a warning to disconnect the appliance from its power source during service and when replacing parts		N/A
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug is such that an operator can check from any of the points to which he has access that the plug remains removed		N/A
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N/A
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	a manual operation is required to restart it		N/A
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		N/A
20.2	Dangerous moving transmission parts safeguarded either by design or guards		N/A
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		N/A
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		—
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N/A
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N/A
	Interlocking movable guards used where frequent access is required		N/A
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N/A
	The distance between the seat and the control devices capable of being adapted to the operator		N/A
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N/A
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N/A
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N/A
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N/A
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or		N/A
	so designed that they can be fitted with such attachments, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	be shaped in such a way that standard lifting gear can easily be used		N/A
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely		N/A
22.ZE.5	The fixing systems of fixed guards which prevent access to hazardous moving transmission parts only removable with the use of tools		N/A
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N/A
	Where possible, guards are incapable of remaining in place without their fixings		N/A
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N/A
	Movable guards are interlocked		N/A
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N/A
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		—
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N/A
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N/A
	Interlocking movable guards remain attached to the appliance when open, and		N/A
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N/A
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions		N/A
	The guard is opened to the extent needed to cause the interlocking to operate and is then closed, the number of operations being defined in the specific Part 2		N/A
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N/A
	After these tests the interlock system is fit for further use		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		—
	- adjustable manually or automatically, depending on the type of work involved, and		N/A
	- readily adjustable without the use of tools		N/A
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		N/A
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N/A
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N/A
	Such isolators are clearly identified, and		N/A
	they are capable of being locked if reconnection endanger persons		N/A
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N/A
22.ZE.10	Noise reduction is achieved by applying measures at source to control noise, for example EN ISO 11688-1:2009		N/A
	The success of the applied noise reduction measures is assessed based on the actual noise emission values in relation to other machines of the same type with comparable non-acoustical technical data		N/A
	Compliance is checked by the noise test code, if any, given in part 2		N/A
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD		—
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive)..... :	LVD	P
ZG	ANNEX ZG (NORMATIVE) UV APPLIANCES		—
	The following modifications to this standard apply to appliances having UV emitters		N/A
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109		N/A

Clause	Requirement + Test	Result - Remark	Verdict
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source		N/A
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant		N/A
ZH	ANNEX ZH (INFORMATIVE) Common plug and socket-outlet types in CENELEC countries		—
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:		—
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4 :		P
	- for class II appliances, standard sheet EU5, EU6 or EU7..... :		N/A
	There are exemptions or differences in certain CENELEC countries		P
ZI	ANNEX ZI (INFORMATIVE) Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A		—
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1		P
ZZA	ANNEX ZZA (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96] AIMED TO BE COVERED		—
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		P
ZZB	ANNEX ZZB (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED		—

Clause	Requirement + Test	Result - Remark	Verdict
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		P
	ANNEX EN 62233:2008 + AC:2008 EMF- ELECTROMAGNETICS FIELDS		—
	The tested product also complies with the requirements of EN 62233:2008		—
	Limit 100%	Measured max. : <10 %	P

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Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60335-2-16:2002, IEC 60335-2-16:2002/AMD1:2008, IEC 60335-2-16:2002/AMD2:2011 IEC 60335-1:2010, IEC 60335-1:2010/AMD1:2013, IEC 60335-1:2010/AMD2:2016 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY – PART 2-16: PARTICULAR REQUIREMENTS FOR FOOD WASTE DISPOSERS			
Differences according to		EN 60335-2-16:2003 + A1:2008 + A2:2012 + A11:2018 used in conjunction with EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 + A16:2023 EN 62233:2008	
TRF template used.....		IECEE OD-2020-F2:2022, Ed. 1.2	
Attachment Form No.		EU_GD_IEC60335_2_16F	
Attachment Originator.....		Nemko Group AS	
Master Attachment		Dated 2024-07-12	
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CENELEC COMMON MODIFICATIONS (EN)			—
6.1	Delete “class 0” and “class 01”		N/A
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
7.12	The instructions include the substance of the following:		—
	- make sure that the installation of this appliance is allowed by the authorities		P
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test, except that		P
	appliances normally used on the floor and having a mass exceeding 40 kg are not tilted		N/A
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P

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Clause	Requirement + Test	Result - Remark	Verdict
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		P
8.1.3	Instead of test probe B, test probe 18 and test probe 13, for appliances other than those of class II, test probe 41 of IEC 61032 is applied with a force not exceeding 1 N to live parts of visibly glowing heating elements, all poles of which can be disconnected by a single switching action		N/A
8.2	Compliance is checked by inspection and by applying the test probes of EN 61032 in accordance with the conditions specified in 8.1.1		P
	Test probe B and probe 18 of EN 61032 are applied to built-in appliances and fixed appliances only after installation		N/A
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling		N/A
20.2	For appliances having hazardous moving parts, due to their working function, e.g. the needle of a sewing machine, tools of kitchen machines or the blade of an electrical knife, full protection is not possible for performing their intended use		N/A
	When using a test probe similar to test probe B of EN 61032, having a circular stop face and applied with a force of 5N, the accessories and detachable covers are removed		P
	When using test probe 18 it is applied with a force of 2,5N on the appliance fully assembled		P
22.12	Other parts intended to be detached during use, maintenance or cleaning (e.g. batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers		P
22.17	The requirement is not applicable to built-in appliances		N/A
22.44	An appliance is child-appealing if one of the following criteria is present:		—
	- appliance decorated using faces, cartoon like characters, or similar images		N/A
	- appliance using shapes representing animals, characters, persons or scale models		N/A
	An appliance is child-appealing if more than one of the following criteria are present:		—
	- using non-functional light (functional light is e.g. illumination of an object or area, signal indicating status of an appliance)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- using non-functional sound (e.g. music)		N/A
	- using non-functional movement		N/A
	If the appliance is child-appealing and		—
	- has a mass less than 4 kg, and		N/A
	- is mounted or normally intended for use at a height less than 850 mm,		N/A
	the following conditions are met:		N/A
	- surface temperature rise requirements not exceeded		N/A
	- hazardous moving parts not accessible		N/A
	- live parts not accessible		N/A
	- liquid temperature requirement not exceeded,		N/A
	unless for vessels in which two independent and sequential actions are needed to access the liquid		N/A
	- the requirement of 22.12 is applicable for all accessible parts of the appliance		N/A
24.1	Components comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply		P
	Motors are not required to comply with EN 60034-1, but tested as part of the appliance according to this standard		P
	Relays are tested as part of the appliance according to this standard		N/A
	Relays may be alternatively tested to EN 60730-1 and the additional requirements in EN 60335-1		N/A
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance		P
	Components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P
	Components that have not been tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard		P
	Components that have been tested and shown to comply with the resistance to fire requirements in the EN standard for the relevant component need not be retested provided that:		—
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- the test report for the component states the values of t_e and t_i acc. to EN 60695-2-11		N/A
	If the above two conditions are not satisfied, the component is tested as part of the appliance		P
	Power electronic converter circuits are not required to comply with EN 62477-1, but tested as part of the appliance according to this standard		N/A
	Unless components have been tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components that have not been tested and found to comply with the relevant EN standard, and		P
	components that are not marked or not used in accordance with their marking,		P
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		P
	Lamp-holders and starter-holders that have not been tested and found to comply with the relevant EN standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance		N/A
	Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		P
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard		P
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		N/A
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if		P
	direct supply to these parts from the supply mains gives rise to a hazard		N/A
	For plugs used in CENELEC countries Annex ZH applies		P

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Clause	Requirement + Test	Result - Remark	Verdict
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1		N/A
25.1	Plugs and pins for insertion into socket outlets follow the relevant standards sheets in Annex ZH		P
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors, or		N/A
	when they are liable to be exposed to significant amount of ultraviolet radiation		N/A
25.25	Instead of IEC/TR 60083, dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are in accordance with the dimensions of the relevant plug standard		N/A
	Common plugs and socket-outlets types in CENELEC countries as shown in Annex ZH		N/A
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position,		P
	unless they are held in place near the terminals independently of the solder		N/A
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N/A
32	Compliance regarding electromagnetic fields is checked according to EN 62233		P
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		N/A
	The duration of any of the tests is as specified in 19.7		N/A
ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS (EN)		—
1	Finland, Netherlands		
	Permission to install food waste disposers depends upon the authorities responsible for the sewage system		N/A
	Denmark, Sweden, Norway and Finland		
7.12.8	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Norway		

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Clause	Requirement + Test	Result - Remark	Verdict
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
	Norway		
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A
	Denmark		
22.47	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Ireland, United Kingdom and Cyprus		
25.8	In the table, the line >10 A and ≤16 A is replaced with:		—
	> 10 and ≤ 13 1,25 (1,0) ^b		N/A
	> 13 and ≤ 16 1,5 (1,0) ^b		N/A
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		—
1	Austria, Germany		
	The installation of food waste disposers is not allowed		N/A
	Ireland		
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		N/A
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A

Clause	Requirement + Test	Result - Remark	Verdict
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		N/A
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		—
	List of IEC and CENELEC code designations for flexible cords		P
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE		—
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative		N/A
	Model or type reference		N/A
	Serial number, if any		N/A
	Production year		N/A
	Designation of the appliance		N/A
7.12	Instructions provided with the appliance so that the appliance can be used safely		N/A
	The instructions contain at least the following information:		—
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		N/A
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		N/A
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		N/A
	- the general description of the appliance, when needed due to the complexity of the appliance		N/A
	- specific precautions required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving		N/A
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		N/A
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A)		N/A
7.12.ZE2	The instructions include a warning to disconnect the appliance from its power source during service and when replacing parts		N/A
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug is such that an operator can check from any of the points to which he has access that the plug remains removed		N/A
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N/A
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N/A
	a manual operation is required to restart it		N/A
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		N/A
20.2	Dangerous moving transmission parts safeguarded either by design or guards		N/A
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		N/A
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		—
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N/A
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N/A
	Interlocking movable guards used where frequent access is required		N/A
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N/A
	The distance between the seat and the control devices capable of being adapted to the operator		N/A

Clause	Requirement + Test	Result - Remark	Verdict
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N/A
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N/A
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N/A
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N/A
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or		N/A
	so designed that they can be fitted with such attachments, or		N/A
	be shaped in such a way that standard lifting gear can easily be used		N/A
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely		N/A
22.ZE.5	The fixing systems of fixed guards which prevent access to hazardous moving transmission parts only removable with the use of tools		N/A
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N/A
	Where possible, guards are incapable of remaining in place without their fixings		N/A
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N/A
	Movable guards are interlocked		N/A
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N/A
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		—
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N/A
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Interlocking movable guards remain attached to the appliance when open, and		N/A
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N/A
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions		N/A
	The guard is opened to the extent needed to cause the interlocking to operate and is then closed, the number of operations being defined in the specific Part 2		N/A
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N/A
	After these tests the interlock system is fit for further use		N/A
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		—
	- adjustable manually or automatically, depending on the type of work involved, and		N/A
	- readily adjustable without the use of tools		N/A
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		N/A
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N/A
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N/A
	Such isolators are clearly identified, and		N/A
	they are capable of being locked if reconnection endanger persons		N/A
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N/A
22.ZE.10	Noise reduction is achieved by applying measures at source to control noise, for example EN ISO 11688-1:2009		N/A
	The success of the applied noise reduction measures is assessed based on the actual noise emission values in relation to other machines of the same type with comparable non-acoustical technical data		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Compliance is checked by the noise test code, if any, given in part 2		N/A
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD		—
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive)..... :	LVD	P
ZG	ANNEX ZG (NORMATIVE) UV APPLIANCES		—
	The following modifications to this standard apply to appliances having UV emitters		N/A
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109		N/A
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source		N/A
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant		N/A
ZH	ANNEX ZH (INFORMATIVE) Common plug and socket-outlet types in CENELEC countries		—
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:		—
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4..... :		P
	- for class II appliances, standard sheet EU5, EU6 or EU7..... :		N/A
	There are exemptions or differences in certain CENELEC countries		P
ZI	ANNEX ZI (INFORMATIVE) Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A		—
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1		P

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Clause	Requirement + Test	Result - Remark	Verdict
ZZA	ANNEX ZZA (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96] AIMED TO BE COVERED		—
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 2 when used together with Part 1 provides one means of conformity with the safety objectives		P
ZZB	ANNEX ZZB (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED		—
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		P
	ANNEX EN 62233:2008 + AC:2008 EMF- ELECTROMAGNETICS FIELDS		—
	The tested product also complies with the requirements of EN 62233:2008		—
	Limit 100%	Measured max. : <10 %	P

Photo documentation

Photo 1



Description: External view - CY01

Photo 2



Description: External view - CY01

Photo 3



Description: External view - CY01

Photo 4



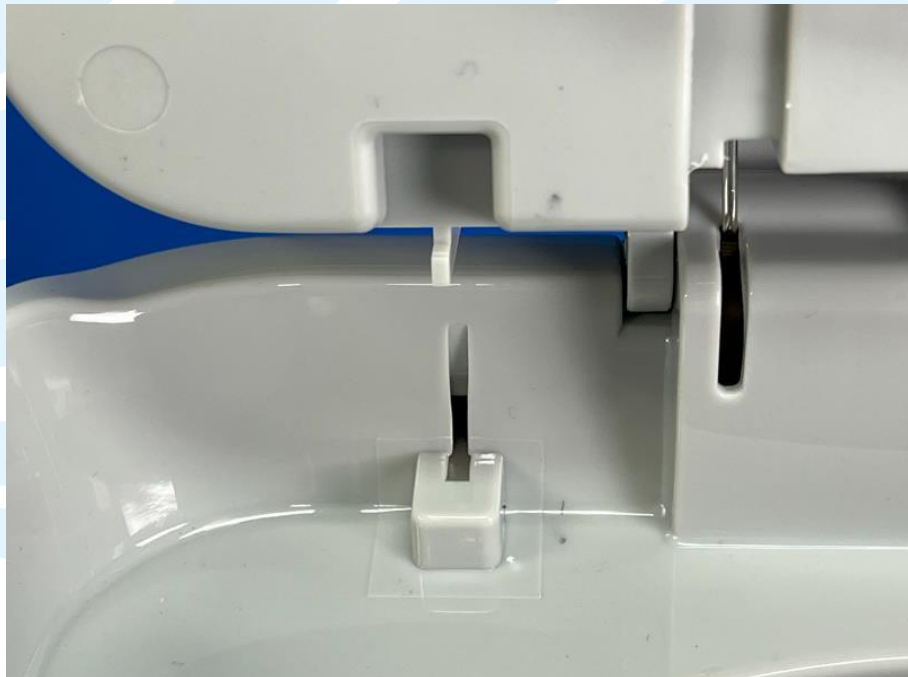
Description: External view - CY01

Photo 5



Description: External view - CY01

Photo 6



Description: Interlock switch - CY01

Photo 7



Description: Internal view - CY01

Photo 8



Description: Internal view - CY01

Photo 9



Description: Internal view - CY01

Photo 10



Description: Internal view - CY01

Photo 11



Description: Internal view - CY01

Photo 12



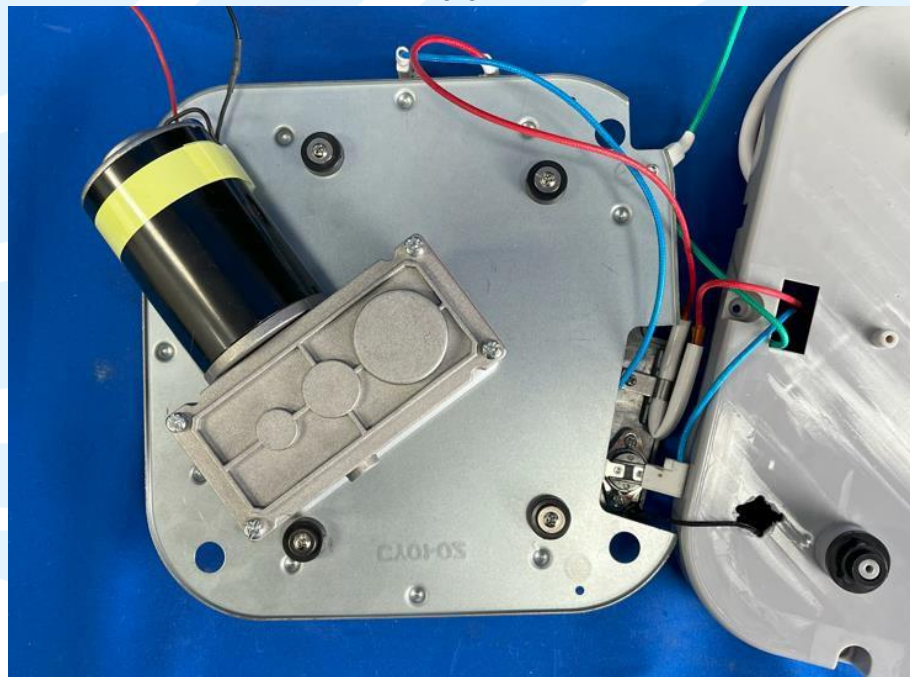
Description: Earthing terminal - CY01

Photo 13



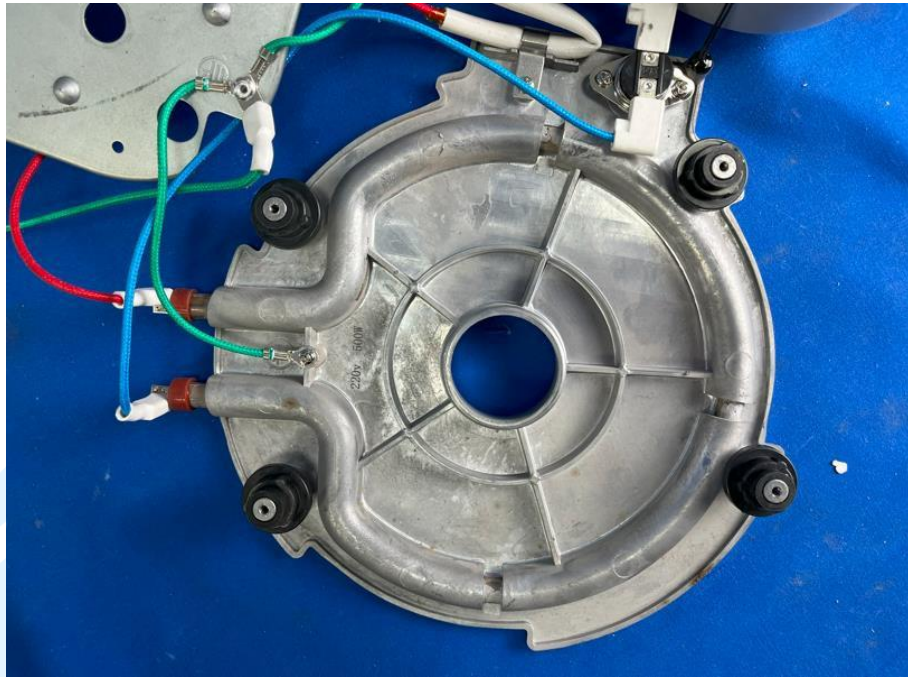
Description: Earthing terminal - CY01

Photo 14



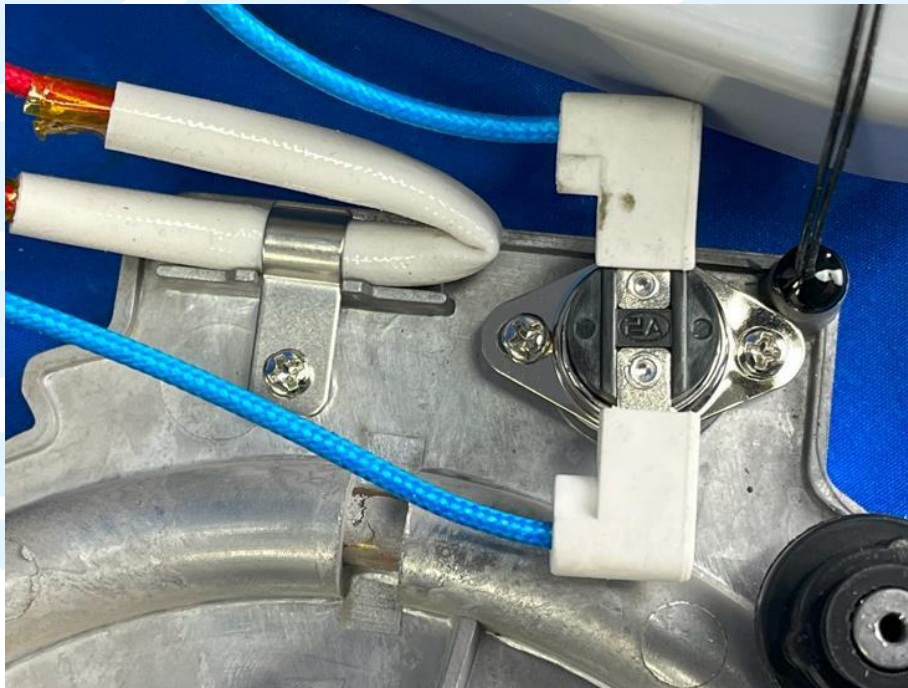
Description: Internal view - CY01

Photo 15



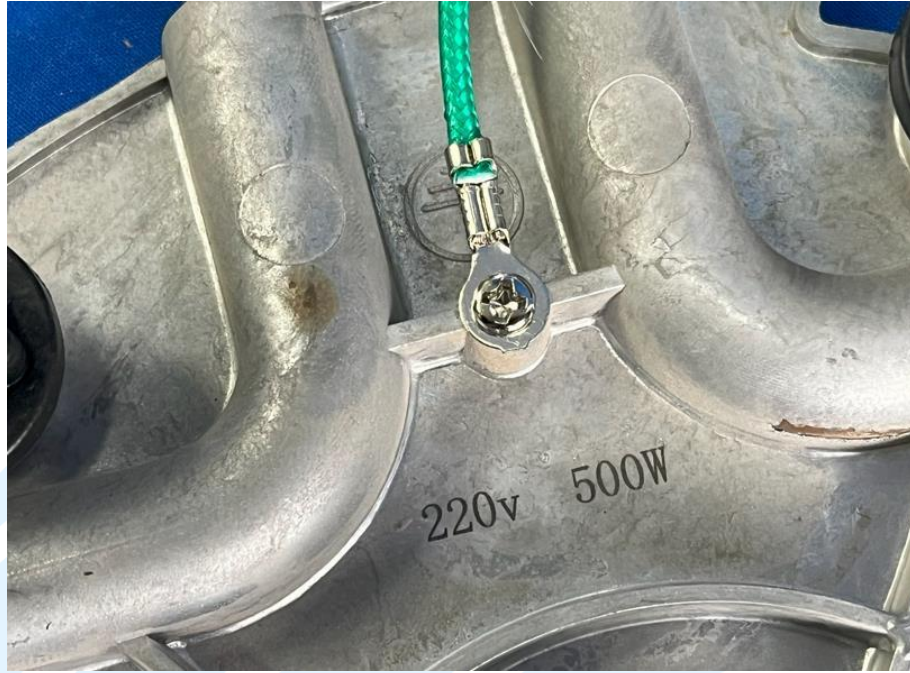
Description: Heating element - CY01, CY02, CY03

Photo 16



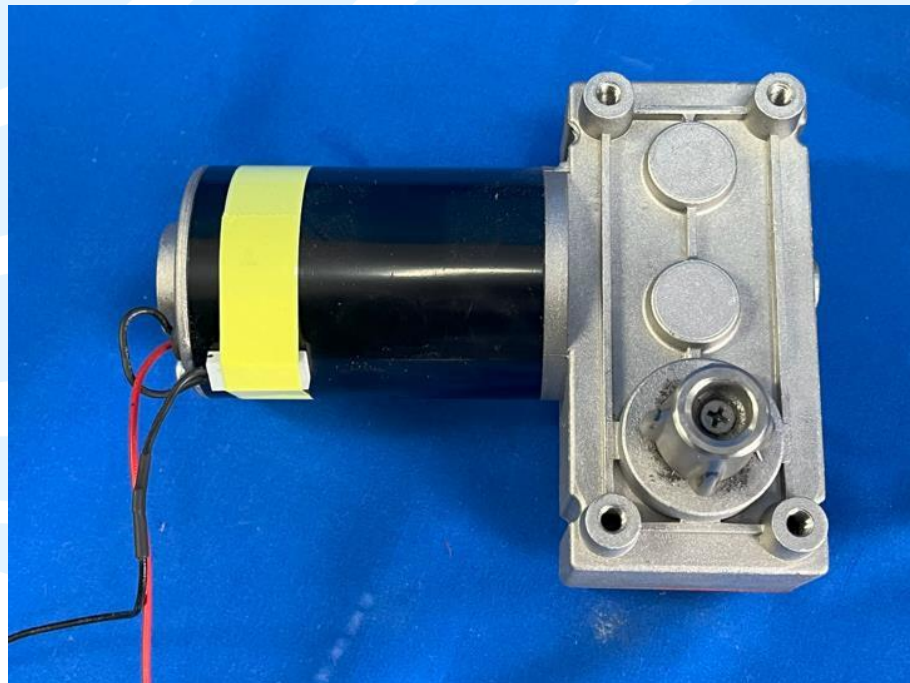
Description: Thermal link and Thermal cut- out - CY01, CY02, CY03

Photo 17



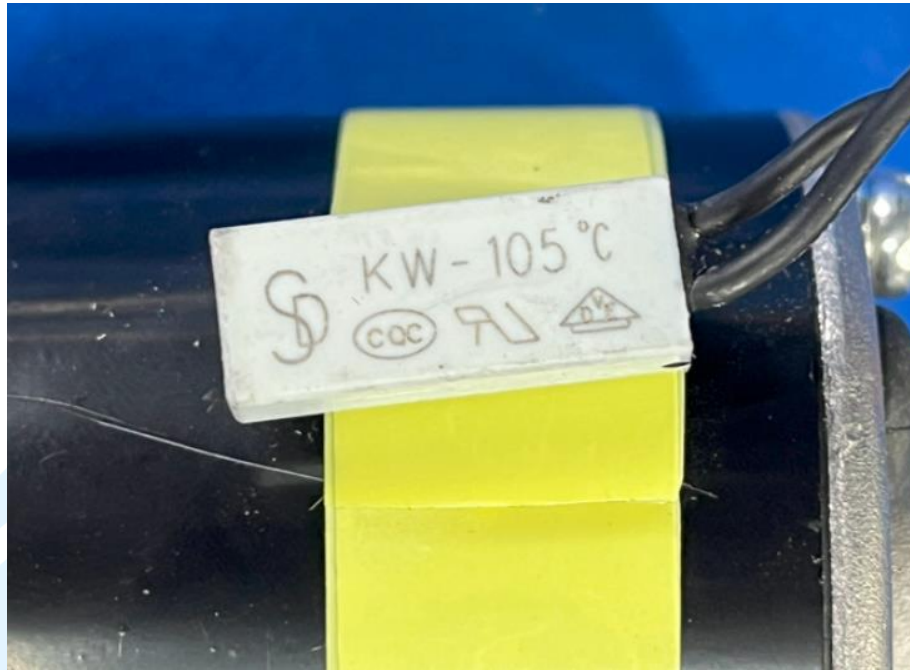
Description: Earthing terminal - CY01, CY02, CY03

Photo 18



Description: Motor - CY01, CY02, CY03

Photo 19



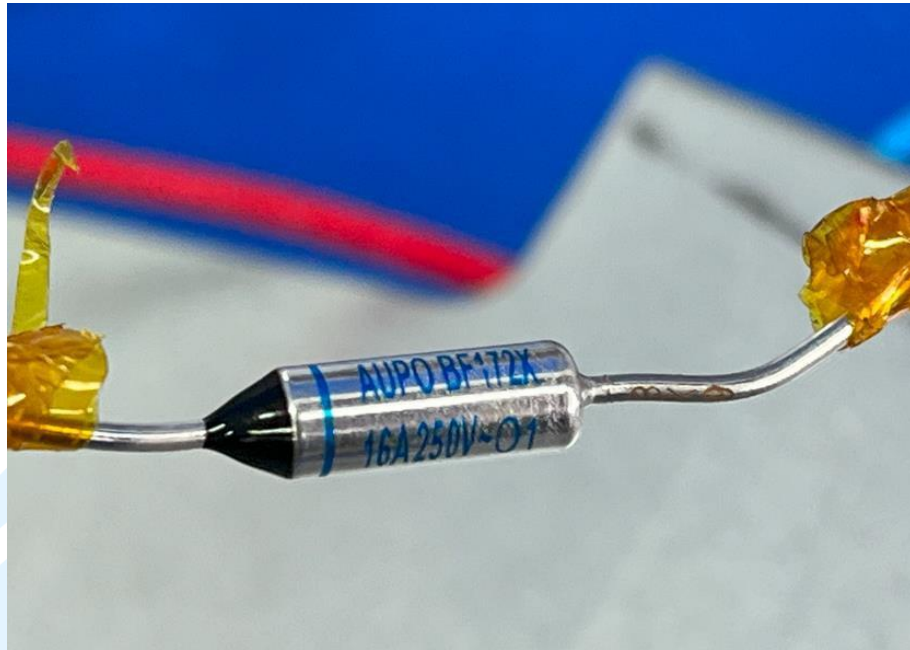
Description: Thermal motor protector - CY01, CY02, CY03

Photo 20



Description: Thermal cut - out - CY01, CY02, CY03

Photo 21



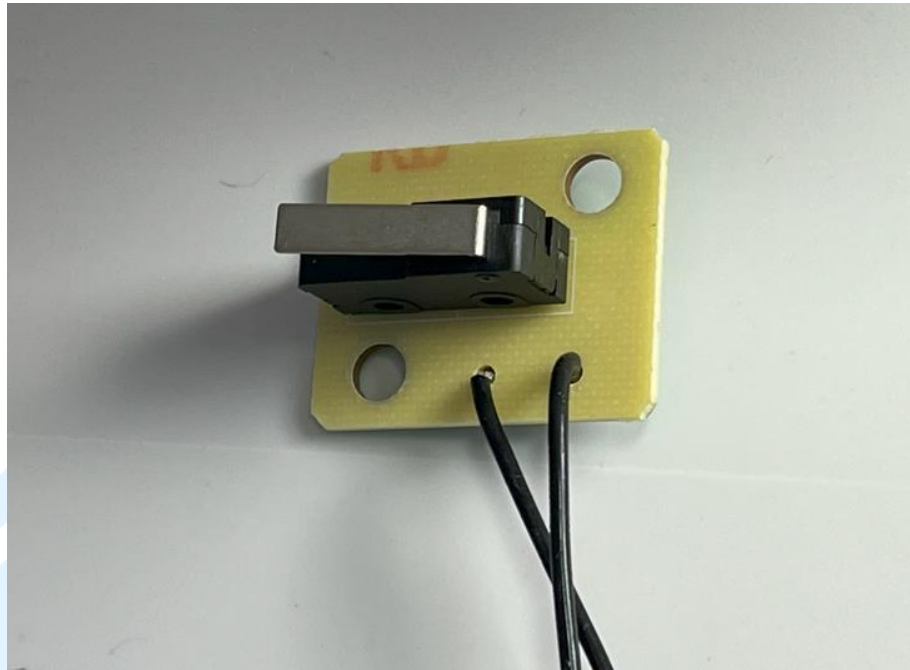
Description: Thermal link - CY01, CY02, CY03

Photo 22



Description: Internal view - CY01

Photo 23



Description: Interlock switch - CY01, CY02, CY03

Photo 24



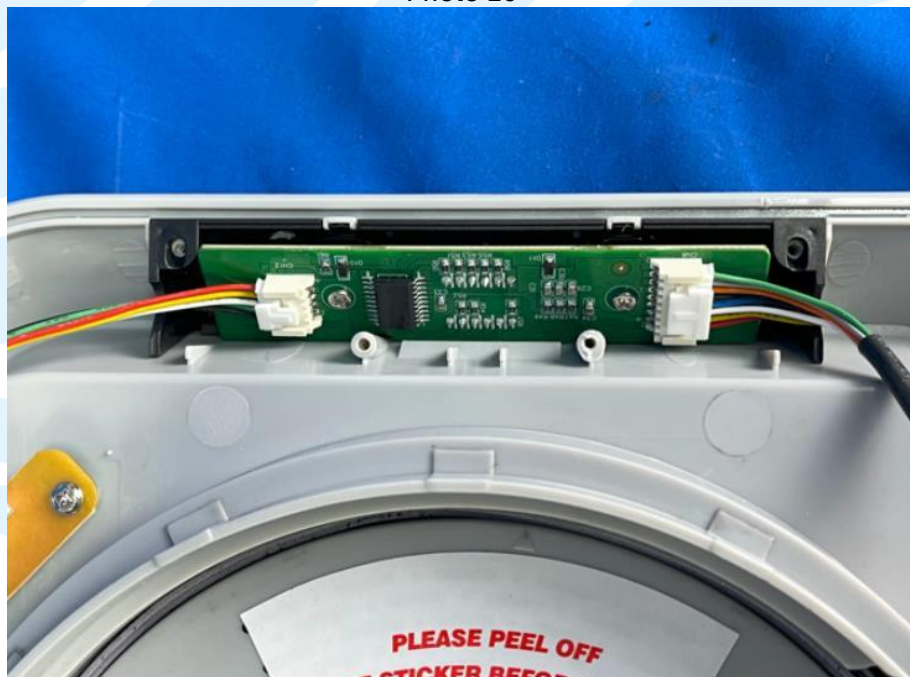
Description: Interlock switch - CY01, CY02, CY03

Photo 25



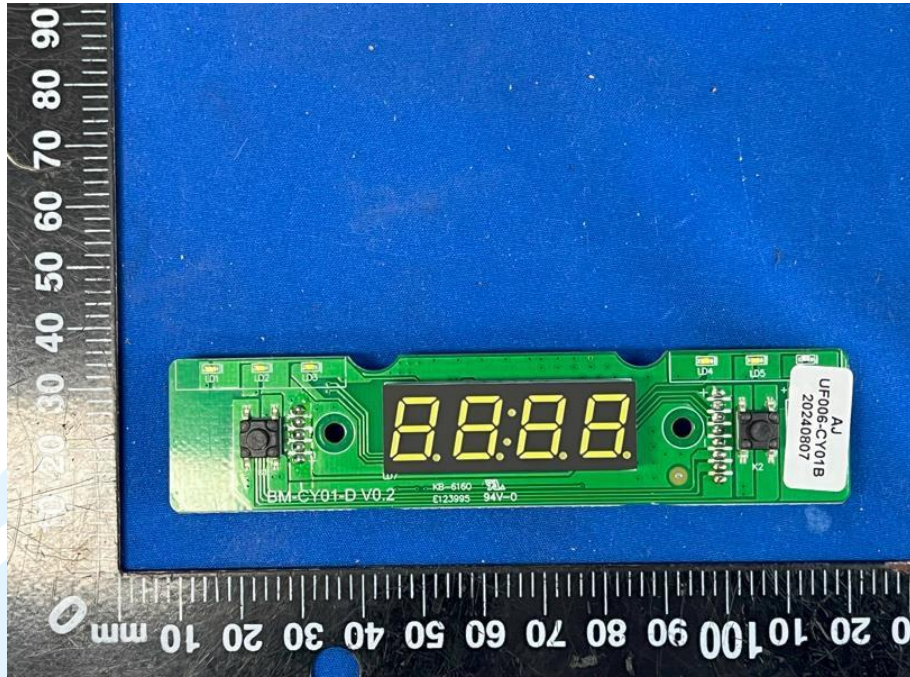
Description: Internal view - CY01

Photo 26



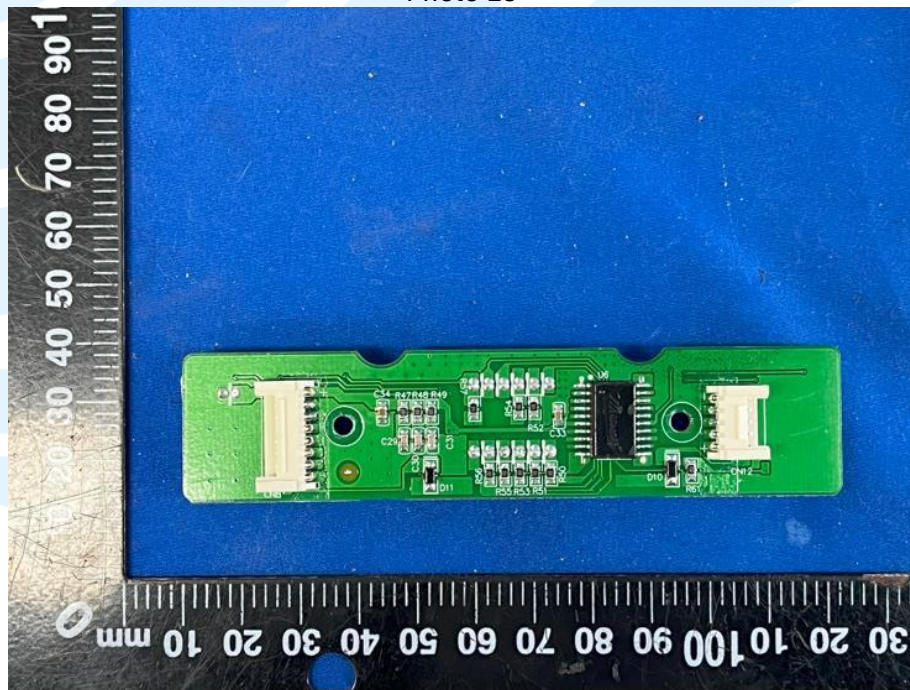
Description: Internal view - CY01

Photo 27



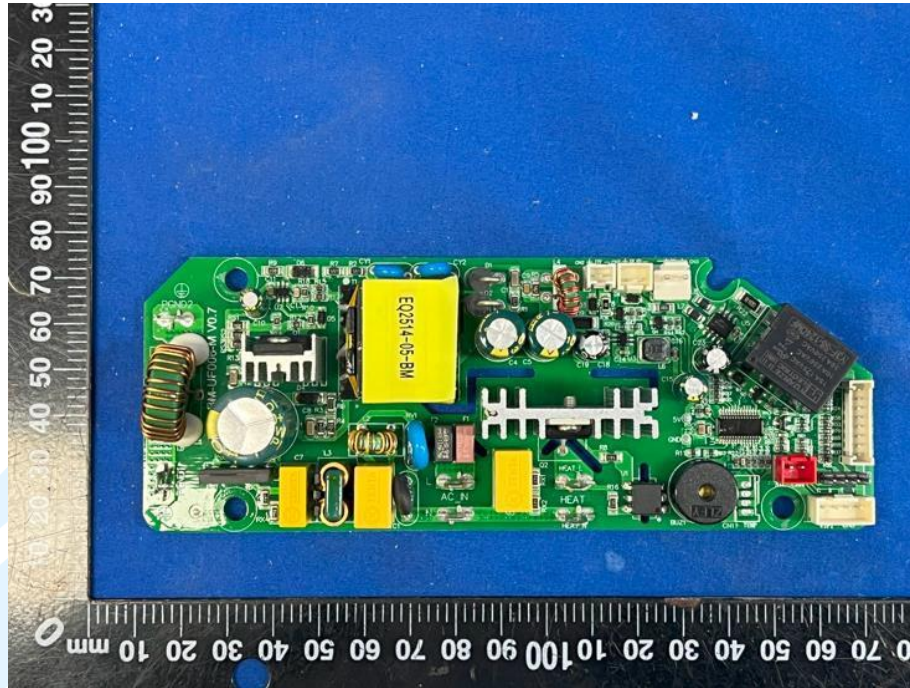
Description: Control PCB - CY01

Photo 28



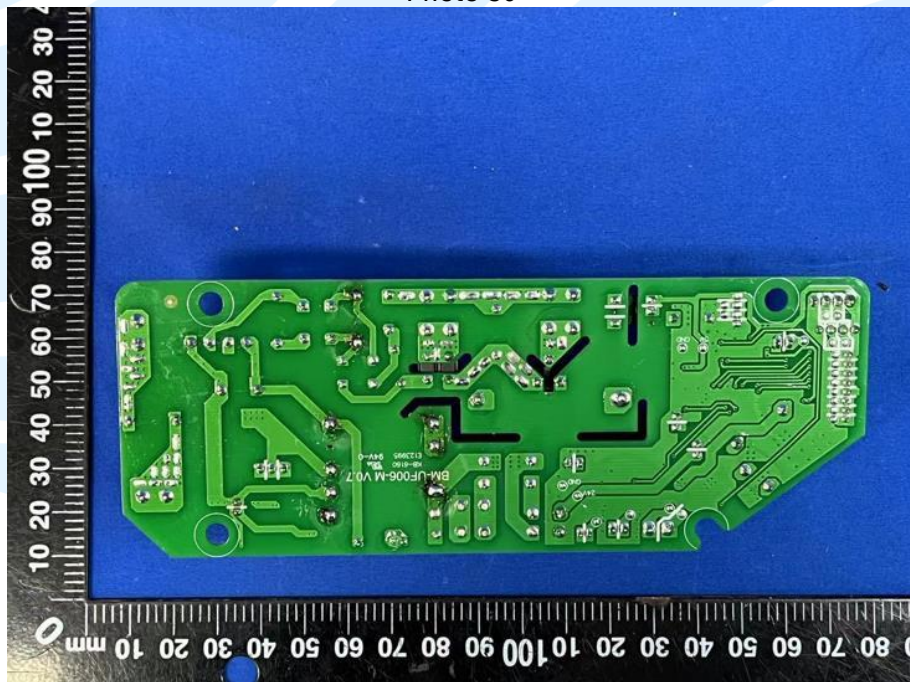
Description: Control PCB - CY01

Photo 29



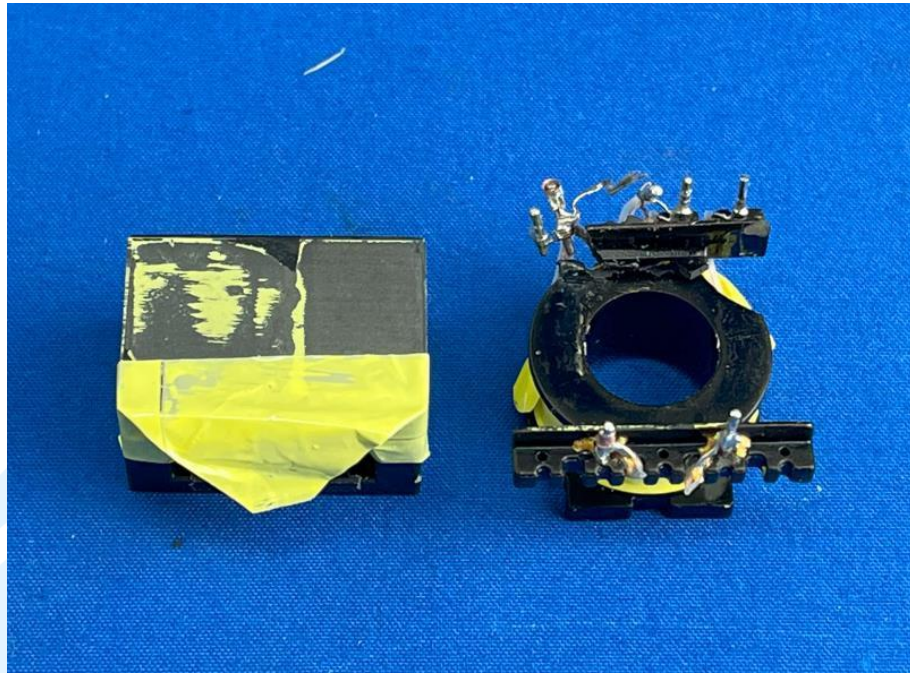
Description: Power PCB - CY01, CY02, CY03

Photo 30



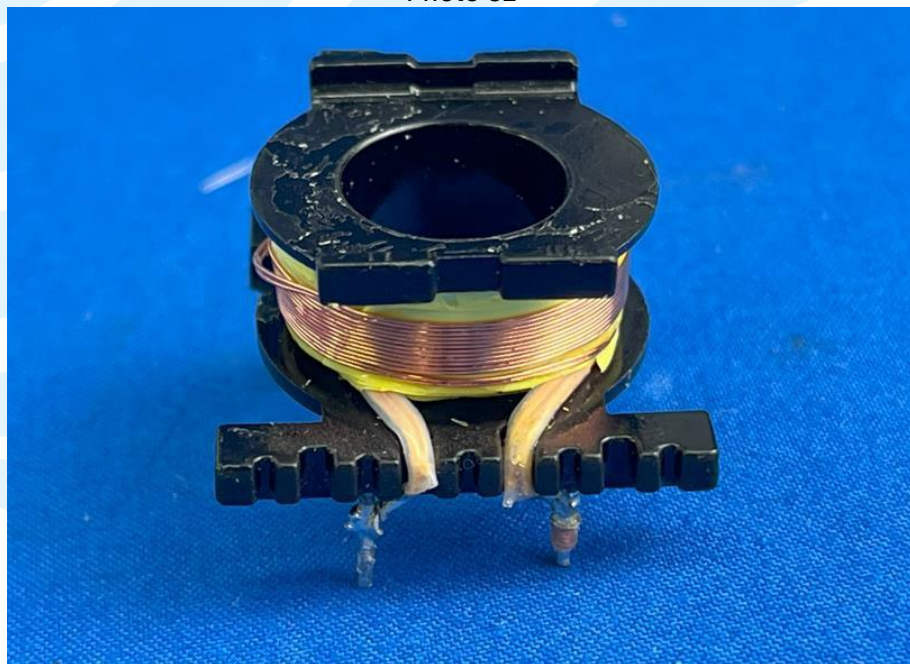
Description: Power PCB - CY01, CY02, CY03

Photo 31



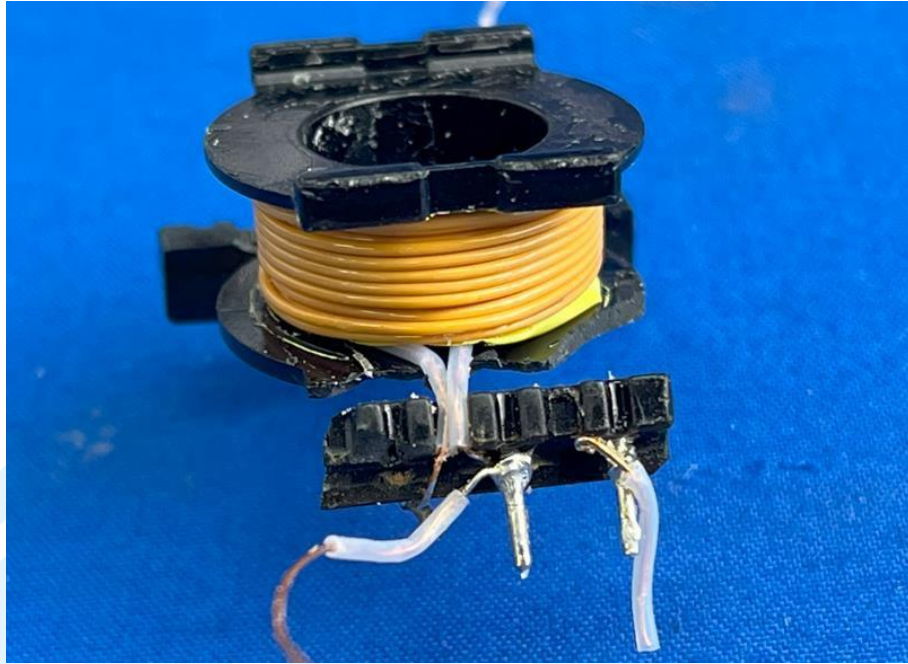
Description: Transformer - CY01, CY02, CY03

Photo 32



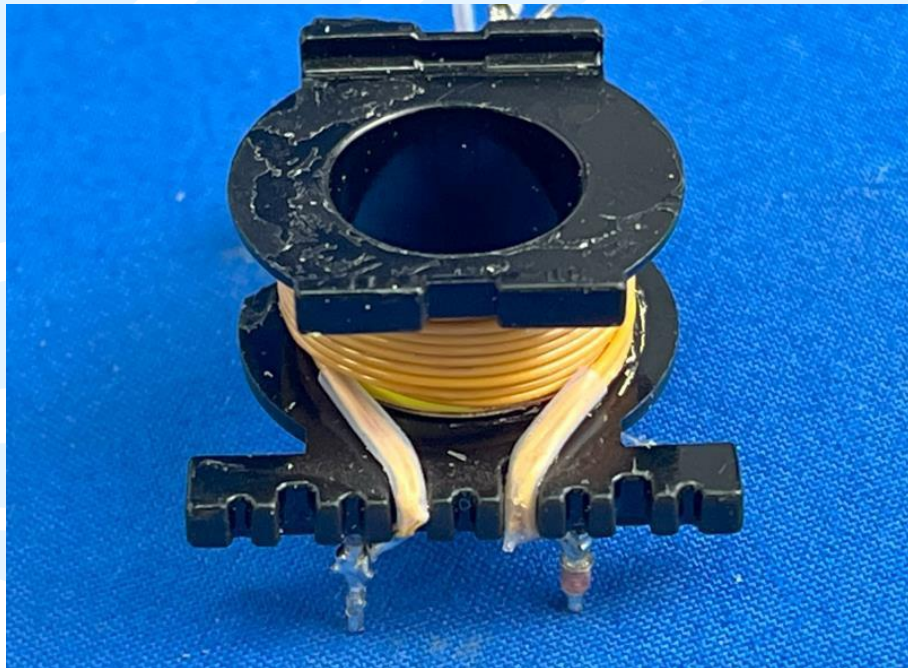
Description: Transformer - CY01, CY02, CY03

Photo 33



Description: Transformer - CY01, CY02, CY03

Photo 34



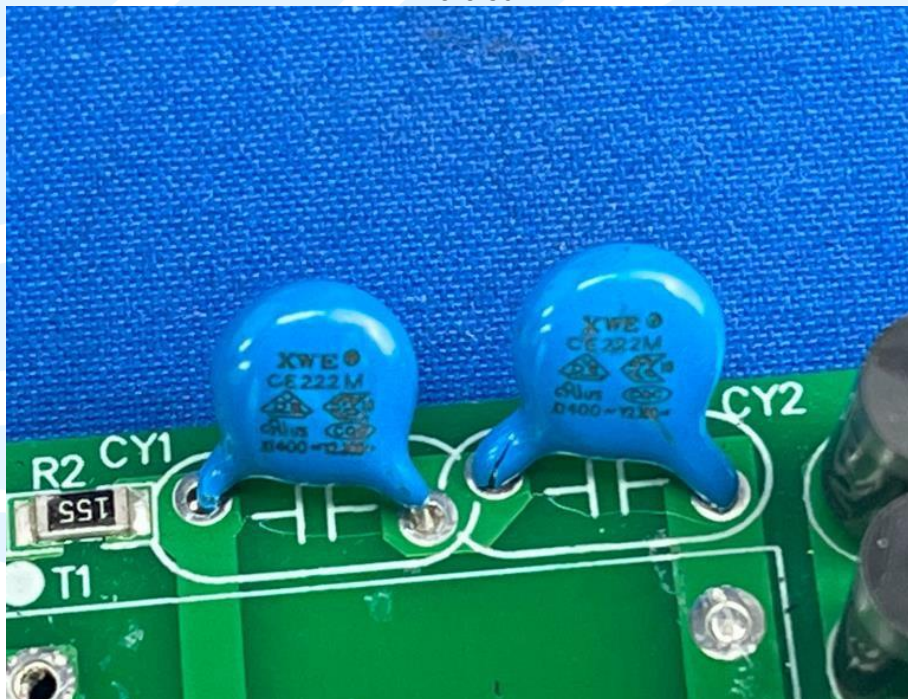
Description: Transformer - CY01, CY02, CY03

Photo 35



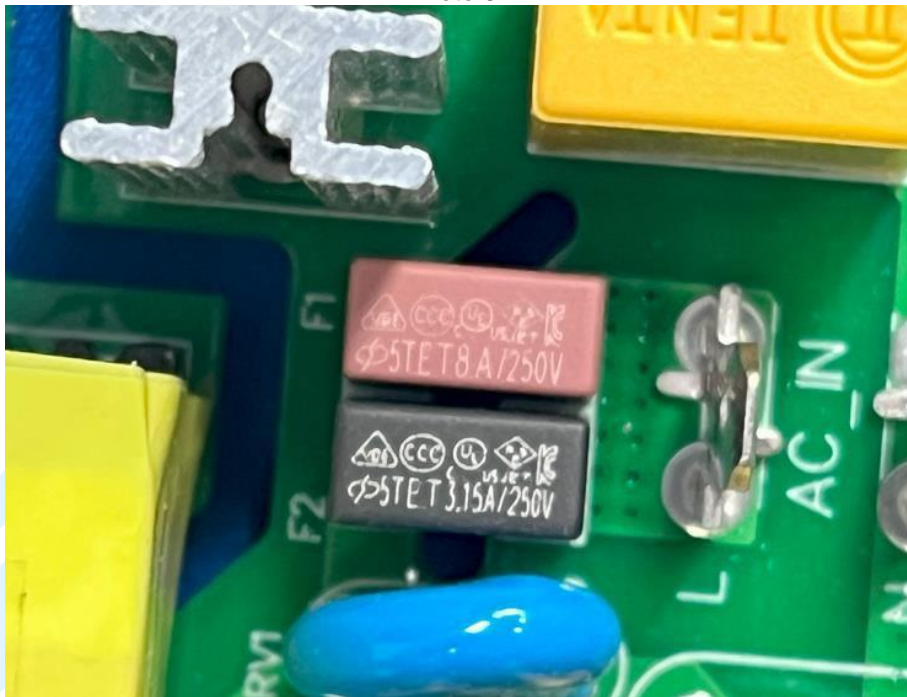
Description: Relay (REL1) - CY01, CY02, CY03

Photo 36



Description: Y capacitor (CY1, CY2) - CY01, CY02, CY03

Photo 37



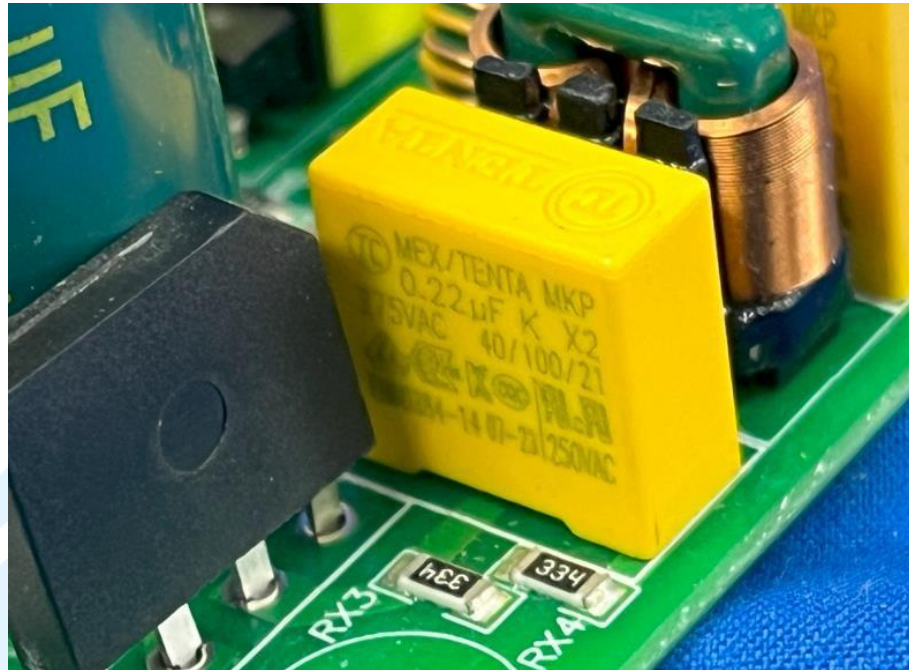
Description: Fuse link (F1) (F2) - CY01, CY02, CY03

Photo 38



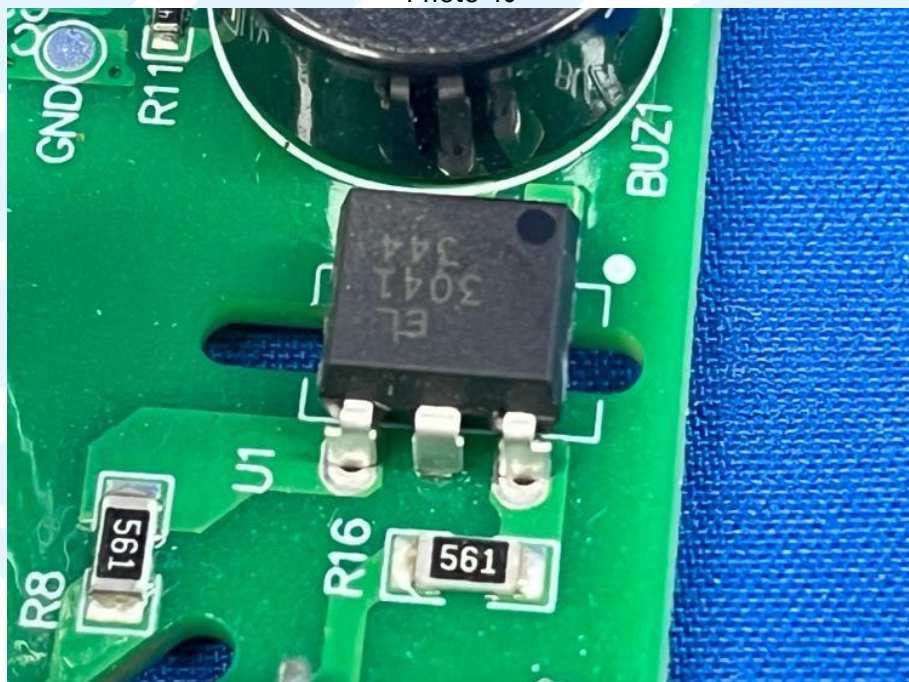
Description: Varistor (RV1) - CY01, CY02, CY03

Photo 39



Description: X capacitor (C7) - CY01, CY02, CY03

Photo 40



Description: Optocoupler (U1) - CY01, CY02, CY03

Photo 41



Description: X capacitor (C3, C6) - CY01, CY02, CY03

Photo 42



Description: Internal view - CY01

Photo 43



Description: DC fan - CY01

Photo 44



Description: Plug - CY01, CY02, CY03

Photo 45



Description: Power cord - CY01, CY02, CY03

Photo 46



Description: External view - CY02, CY03

Photo 47



Description: External view - CY02

Photo 48



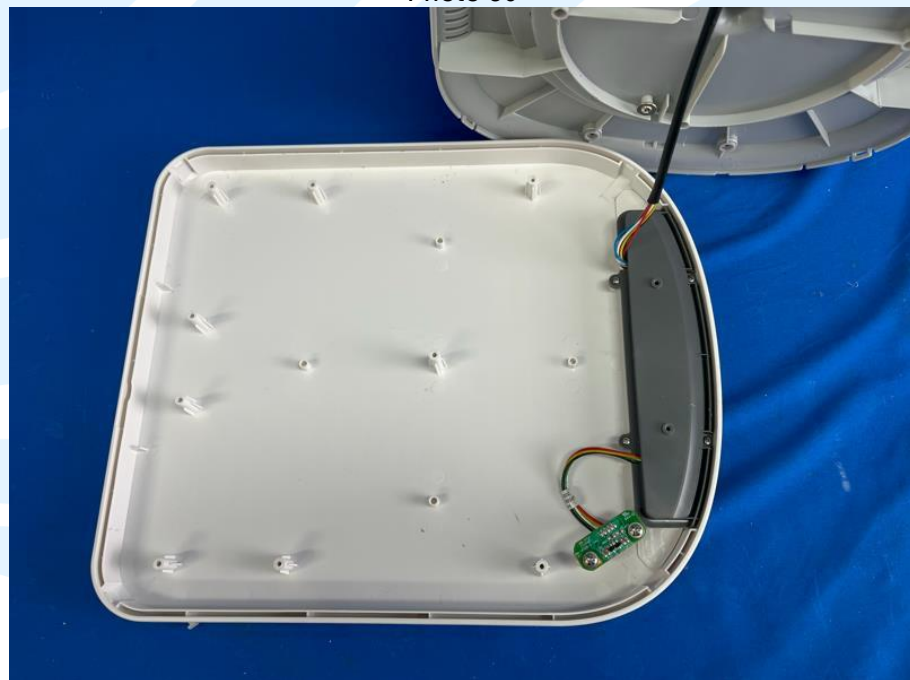
Description: External view - CY03

Photo 49



Description: Description: External view - CY02, CY03

Photo 50



Description: Description: Internal view - CY02, CY03

Photo 51



Description: Internal view - CY02, CY03

Photo 52



Description: Control PCB - CY02, CY03

Photo 53



Description: Description: Control PCB - CY02, CY03

--- End of The Test Report ---