Test Report issued under the responsibility of:

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TEST REPORT
IEC 60335-2-9
Safety of household and similar electrical appliances
Part 2: Particular requirements for grills, toasters and similar cooking appliances

Report Number. .....:	EFSH15030095-IE-01-L01-A2
Date of issue .....:	2015-03-16, Amendment 2: 2017-07-28
Total number of pages.....	45 pages
Applicant's name.....:	Cixi Tianma Electrical Appliance Co., Ltd.
Address .....:	No. 483 Zhenxi Road, Zhouxiang Town, Cixi City, Ningbo, 315324, P.R.C
Test specification:	
Standard.....:	☒EN 60335-2-9: 2003 + A1: 2004 + A2: 2006 + A12: 2007 + A13: 2010 ☒EN 60335-1: 2012 + A11: 2014 ☒EN 62233: 2008
Test procedure .....:	GS + CE-LVD
Non-standard test method……:	N/A
Test Report Form No.....:	IEC60335_2_9H
Test Report Form(s) Originator.....:	LCIE
Master TRF.....:	Dated 2012-10

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

Test item description .....:	Toaster
Trade Mark .....:	--
Manufacturer.....:	Cixi Tianma Electrical Appliance Co., Ltd.
Model/Type reference .....:	TM-2001, TM-2001J, TM-2001F, TM-2001FJ, TM-2001T, TM-2001JT, TM-2001FT, TM-2001FJT, TM-2005, TM-2005J, TM-2005F, TM-2005FJ, TM-2005T, TM-2005JT, TM-2005FT, TM-2005FJT, TM-2006, TM-2006J, TM-2006F, TM-2006FJ, TM-2006T, TM-2006JT, TM-2006FT, TM-2006FJT, TM-2009F, TM-2009FJ, TM-2015T, TM-2016T, TM-2019, TM-2019T, TM-2019TJ, TM-2020, TM-2020T, TM-2020TJ
Ratings .....:	220-240V~, 50/60Hz, Class I for all models TM-2001, TM-2001J, TM-2001F, TM-2001FJ, TM-2001T, TM-2001JT, TM-2001FT, TM-2001FJT: 600-700W, TM-2005, TM-2005J, TM-2005F, TM-2005FJ, TM-2005T, TM-2005JT, TM-2005FT, TM-2005FJT, TM-2006, TM-2006J, TM-2006F, TM-2006FJ, TM-2006T, TM-2006JT, TM-2006FT, TM-2006FJT: 700-800W; TM-2009F, TM-2009FJ: 1100-1300W; TM-2015T, TM-2019, TM-2019T, TM-2019TJ, TM-2020, TM-2020T, TM-2020TJ: 650-750W; TM-2016T: 1280-1480W

Testing procedure and testing location:			
☒	**Testing Laboratory:**	Eurofins Product Testing Service (Shanghai) Co., Ltd.	
Testing location/ address.....:		No. 395 West Jiangchang Road, Jing'an District, Shanghai, China	
☐	**Associated CB Laboratory:**	N/A	
Testing location/ address.....:		N/A	
	Tested by (name + signature).....:	Michael Liu (Project Engineer)	Michael Liu
	Approved by (name + signature):	Brian Pan (Project Engineer)	Brian Pan
☐	**Testing procedure: TMP**		
Testing location/ address.....:		N/A	
	Tested by (name + signature).....:	N/A	
	Approved by (name + signature)..:	N/A	
☐	**Testing procedure: WMT**		
Testing location/ address.....:		N/A	
	Tested by (name + signature).....:	N/A	
	Witnessed by (name + signature):	N/A	
	Approved by (name + signature):	N/A	
☐	**Testing procedure: SMT**		
Testing location/ address.....:		N/A	
	Tested by (name + signature)...:	N/A	
	Approved by (name + signature).:	N/A	
	Supervised by (name + signature).....:	N/A	
☐	**Testing procedure: RMT**		
Testing location/ address.....:		N/A	
	Tested by (name + signature) :	N/A	
	Approved by (name + signature):	N/A	
	Supervised by (name + signature):	N/A	

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

EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES(Eurofins_GD_IEC60335_2_9H): 5 pages (Incorporated in the main report)

Photo document: 16 pages (separate file)

Constructional data form(CDF): 6 pages (separate file)

Summary of testing: From the result of our inspection and tests on the submitted samples, we conclude they comply with the requirements of the standards.

Tests performed (name of test and test clause):

☒Cl.7 Marking and instruction

☒Cl.8 Protection against access to live parts

☒Cl.10 Power input and current

☒Cl.11 Heating

☒Cl.13 Leakage current and electric strength at operating temperature

☒Cl.15 Moisture resistance

☒Cl.16 Leakage current and electric strength

☒Cl.19 Abnormal operation

☒Cl.20 Stability and mechanical hazards

☒Cl.21 Mechanical strength

☒Cl.22 Construction

☒Cl.23 Internal wiring

☒Cl.29 Clearances, creepage distances and solid insulation

☒Cl.30 Resistance to heat and fire

Testing location:

Eurofins Product Testing Service (Shanghai) Co., Ltd.

No. 395 West Jiangchang Road, Jing'an District, Shanghai, China

Summary of compliance with National Differences

List of countries addressed: European Group Differences, Germany and U.K.

Copy of marking plate (representative, may differ with model No. and rated power input)

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.

Toaster

TM-2001

220-240V~, 50/60Hz, 600-700W, Class I

Cixi Tianma Electrical Appliance Co., Ltd.
No. 483 Zhenxi Road, Zhouxiang Town, Cixi City, Ningbo, 315324, P.R. China
Imported by:
(Full Name of the EU importer)
(Full EU Address of the importer)
Series number: xxxx – xxxx

Test item particulars ..... :	
Classification of installation and use ..... :	Household indoor use only
Supply Connection..... :	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 .....:	2017-07-12
Date (s) of performance of tests.....:	2017-07-12 to 2017-07-28
General remarks: **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.** **"(see Enclosure #)" refers to additional information appended to the report.** **"(see appended table)" refers to a table appended to the report.** **Throughout this report a ☒ comma / ☐ point is used as the decimal separator.** The related applicable CTL/OSM decisions have been considered and the requirements found fulfilled. Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods. **For GS approval, EK1 601-15e Rev1, EK1 AG2 Rev.9 and EK1 222-04 were considered.**	
Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☐ **Yes** ☒ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....:	Same as the applicant

General product information:

The appliances covered by this report are toasters for household and indoor use only.

The detail differences are as below:

Model	Type of shelf	Type of PCB	Type of bread supportor
TM-2001	Movable type	Type A1	No bread supportor
TM-2001J			Type A
TM-2001F	Fixed type		No bread supportor
TM-2001FJ			Type A
TM-2001T	Movable type	Type B1	No bread supportor
TM-2001JT			Type A
TM-2001FT	Fixed type		No bread supportor
TM-2001FJT			Type A
TM-2005	Movable type	Type A2	No bread supportor
TM-2005J			Type A
TM-2005F	Fixed type		No bread supportor
TM-2005FJ			Type A
TM-2005T	Movable type	Type B2	No bread supportor
TM-2005JT			Type A
TM-2005FT	Fixed type		No bread supportor
TM-2005FJT			Type A
TM-2006	Movable type	Type A3	No bread supportor
TM-2006J			Type A
TM-2006F	Fixed type		No bread supportor
TM-2006FJ			Type A
TM-2006T	Movable type	Type B3	No bread supportor
TM-2006JT			Type A
TM-2006FT	Fixed type		No bread supportor
TM-2006FJT			Type A
TM-2009F	Fixed type	Type A1	No bread supportor
TM-2009FJ			Type B

After review, TM-2001FJ, TM-2001JT, TM-2005FJ, TM-2005JT, TM-2006FJ, TM-2006JT and TM-2009FJ were subjected to full tests and the most unfavourable data was recorded.

Amendment 1:
The original test report ref. No. EFSH15030095-IE-01-L01, dated 2015-03-16, was modified on 2016-08-29 to include the following changes and/or additions:

1. Update EK 1 decision to EK1 601-15e Rev1.
2. Two new models: TM-2015T and TM-2016T were added.
3. Compared with original model, TM-2015T and TM-2001T share similar construction except appearance and PCB with other models.
4. TM-2016T has different construction, appearance and PCB.

After review, Cl.8, Cl.10, Cl.11, Cl.13, Cl.15, Cl.16, Cl.19. Cl.20, Cl.21, Cl.22, Cl.23, Cl.29 and Cl.30 (Cl.30.1&Cl.30.2.4) were considered on TM-2016T. Cl.8, Cl.10, Cl.13, Cl.15, Cl.16, Cl.19.11, Cl.29 and Cl.30 (Cl.30.1&Cl.30.2.4) were considered onTM-2015T.

Amendment 2:
The original test report ref. No. EFSH15030095-IE-01-L01, dated 2015-03-16, ref. No. EFSH15030095-IE-01-L01-A1, dated 2016-08-29 was modified on 2017-07-28 to include the following changes and/or additions:

1.Six new models: TM-2019, TM-2019T, TM-2019TJ, TM-2020, TM-2020T and TM-2020TJ were added. The detail differences are as below:

Model	Type of Resistance	With/without bread supportor
TM-2019	Mechanical temperature sensing resistor	Without bread supportor
TM-2019T	Thermistor	Without bread supportor
TM-2019TJ		With bread supportor
TM-2020	Mechanical temperature sensing resistor	Without bread supportor
TM-2020T	Thermistor	Without bread supportor
TM-2020TJ		With bread supportor

2. Compared with original model, TM-2019 series and TM-2006 series share similar construction except appearance and PCB with other models. TM-2020 series and TM-2005 series share similar construction except appearance and PCB with other models.
3. Update the CDF file.

After review, Cl.8, Cl.10, Cl.11, Cl.13, Cl.15, Cl.16, Cl.19. Cl.20, Cl.21, Cl.22, Cl.23, Cl.24, Cl.29 and Cl.30 (Cl.30.1&Cl.30.2.4) were performed on both TM-2019 and TM-2020T as representative.

This report is only valid in conjunction with the original test report: EFSH15030095-IE-01-L01 and EFSH15030095-IE-01-L01-A1.

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		--
7.1	Rated voltage or voltage range (V)..... .....:	Refer to marking plate	P
	Symbol for nature of supply, or..... .....:	Refer to marking plate	P
	Rated frequency (Hz) ....:	Refer to marking plate	P
	Rated power input (W), or ....:	Refer to marking plate	P
	Rated current (A) ....:		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark..... .....:	Refer to marking plate	P
	Model or type reference..... .....:	Refer to marking plate	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0..... .....:	IPX0	N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only		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
	Do not immerse beyond this level (IEC 60335-2-9)		N/A
	Hot surface ..... (IEC 60335-2-9)	Refer to EN60335-2-9/A13 attachment	N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen	220-240V~	P
	Different rated values marked with the values separated by an oblique stroke	50/60Hz	P
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		P
	the power input is related to the arithmetic mean value of the rated voltage range		N/A
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		P
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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	Units of physical quantities and their symbols according to international standardized system		P
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		--
	- marking of terminals exclusively for the neutral conductor (letter N)	For BS plug	P
	- marking of protective earthing terminals (symbol IEC 60417-5019)	Symbol 5019 is used	P
	- marking not placed on removable parts		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 photo	P
	This applies also to switches which are part of a control		N/A
	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		P
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		N/A
	- children being supervised not to play with the appliance		N/A
	Appliance with inlet and intended to be immersed for cleaning, instruction sheet including in substance: ..... (IEC 60335-2-9)		--
	- remove connector before cleaning		N/A
	- dry appliance inlet before re-use		N/A
	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)		--
	-The appliance is suitable for outdoor use		N/A

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	-The supply cord should be regularly examined for signs of damage, and if the cord is damages, the appliance must not be used		N/A
	-The appliance must be supplied through a residual current device (RDC) 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
	The temperature of accessible surfaces may be high when the appliance is operating (IEC 60335-2-9)		P
	If symbol IEC 60417-5041 (DB: 2002-10) is marked on appliances, the instructions shall state that the surfaces are liable to get hot during use (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
	Instructions shall include details on how to clean surfaces in contact with food.(IEC 60335-2-9)		P
	For toaster: details on how to remove breadcrumbs, when applicable.....(IEC 60335-2-9)		P
	For toaster: Bread may burn. Therefore toasters must not be used near or below curtains and other combustible materials. They must be watched ....(IEC 60335-2-9)		P
	For barbecue: WARNING: Charcoal or similar combustible fuels must not be used with this appliance. .....(IEC 60335-2-9)		N/A
	For barbecue: Maximum quantity of water to be poured into the appliance .....(IEC 60335-2-9)		N/A
	If top surface of a hotplate is of glass-ceramic or similar material and protects 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 to be placed on the hotplate since they can get hot(IEC 60335-2-9).		N/A
	For breadmakers: maximum quantities of flour and raising agent that may be used ....(IEC 60335-2-9)		N/A
	The instructions shall include the substance of the following: (IEC 60335-2-9)		--

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	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.		N/A
	Note 101: If the manufacturer wants to limit the use of the appliance to less than above, this must be clearly stated in the instructions. .(IEC 60335-2-9)		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
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N/A
7.13	Instructions and other texts in an official language	English and German	P
7.14	Marking clearly legible and durable, rubbing test as specified	15s with water and 15s with petroleum spirit	P
	The height of the triangle used with symbol IEC 60417-5041(DB:2002-10) shall be at least 12mm (IEC 60335-2-9)		N/A
7.15	Markings on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
	The marking specified for hot surfaces shall be visible when the appliance is operated as in normal used (IEC 60335-2-9)		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		--

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts	Refer to EN60335-2-9/A13	N/A
	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)		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		N/A
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		P
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only	Class II constructions	P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
10	POWER INPUT AND CURRENT		--
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1..:	(see appended table)	P
	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		N/A
	Power input of induction hotplates measured separately (IEC 60335-2-9)		N/A
11	HEATING		--
11.1	No excessive temperatures in normal use		P

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	Compliance for toasters is also checked by the test of 11. 101 (IEC 60335-2-9)		P
11.2	The appliance is held, placed or fixed in position as described.....:	Away from the walls	P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		P
	the windings are non-uniform or it is difficult to make the necessary connections		N/A
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) .....:	For TM-2019 and TM-2020T: 862,5W	P
11.7	Tests carried out in compliance with the paragraphs N° 1 to 12 (IEC 60335-2-9)		P
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 .....:	(see appended table)	P
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of Annex C are carried out		N/A
	Sealing compound does not flow out		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
	For radiant grills, rotary grills and raclette grills, hotplates and cookers, temperature rise of the wall of the test corner not exceed 75 K (IEC 60335-2-9)		N/A
	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 doesn't flow into places where it can 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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
11.101	The toaster in which the bread is inserted through the top are operated for three cycles under normal operation at rated power input. (IEC 60335-2-9).		P
	The temperature rise of accessible surfaces of metallic sides that are at a height lower than 25mm below the top surface shall not exceed 90K (IEC 60335-2-9)		P
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		--
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times the rated power input (W) .....:	For TM-2019 and TM2020T: 862,5W	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
	grill incorporated in oven, oven or grill operated most unfavourable (IEC 60335-2-9).		N/A
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		N/A
	For other appliances, a low impedance ammeter may be used		P
	Leakage current measurements .....:	(see appended table)	P
	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
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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	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		--
15.3	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%R.H	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		N/A
	Tests carried out at room temperature and not connected to the supply		P
	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
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V) .....:	254,4V~	P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by √3 (V) .....:		N/A
	Leakage current measurements .....:	(see appended table)	P
	Limit values doubled if:		--
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified .....:	(see appended table)	N/A

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	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
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
19	ABNORMAL OPERATION		--
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe .....:	(see appended table)	P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		P
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		N/A
	if applicable, to the test of 19.5		N/A
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		N/A
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		N/A
	until steady conditions are established		P

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Clause	Requirement - Test	Result - Remark	Verdict
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A
	Tests of 19.4 and 19.5 are only applicable to: -breadmakers, contact grills, food deshydrators - ovens, roasters, hotplates, cookers, rotary grills if they incorporate a timer or il their instructions indicate a cooking operation longer than 1h (IEC 60335-2-9)	Toaster	N/A
	Toasters are subjected to the tests 19.101,19.102 and 19.103 (IEC 60335-2-9)		P
	Induction hotplates are subjected to the tests 19.104 and 19.105 (IEC 60335-2-9)		N/A
	Pop-corn makers are also subject to the test of 19.106 (IEC 60335-2-9)		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) .....:	For TM-2019: 206,4V, 552,5W; For TM-2020T: 205,3V, 552,5W	P
	Radiant grills, raclette grills that are loaded from the frond , 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 .....(IEC 60335-2-9)		N/A
	Hotplates are operated without a vessel and with the controls adjusted to the highest setting (IEC 60335-2-9)		N/A
	Induction hotplates are operated under conditions of clause 11 but with empty vessels, 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
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W) .....:	For TM-2019: 269,3V, 930W; For TM-2020T: 268,5V, 930W	P
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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	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		N/A
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N/A
	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		N/A
	During and after each test the following is checked:		--
	- the temperature of the windings do not exceed the values specified in table 8		P
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		--
	- 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
19.11.2	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	No hazard	P
	b) open circuit at the terminals of any component	For TM-2019: C1, C2, C3, C4, D1, D2, U1, Q1: No hazard For TM-2020T: C1, C2, C3, D1, D2, D3, Q1: No hazard	P
	c) short circuit of capacitors, unless	For TM-2019: C1, C2, C3, C4: No hazard For TM-2020T: C1, C2, C3: No hazard	P
	they comply with IEC 60384-14		N/A

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	For TM-2019 and TM-2020T: Q1: No hazard	P
	This fault condition is not applied between the two circuits of an optocoupler		N/A
	e) failure of triacs in the diode mode	For TM-2019: D1, D2: No hazard For TM-2019: D1, D2, D3: No hazard	P
	f) failure of microprocessors and integrated circuits	For TM-2019: U1: No hazard	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
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		N/A
	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) .....:	1000V, 1min	P
	- supplementary insulation (V) .....:	1750V, 1min	P
	- reinforced insulation (V) .....:	3000V, 1min	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	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		N/A

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		--
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
	During the test of 19.102 and 19.103 any flame or smoke from the bread are 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
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)		P
	The mechanism operates satisfactorily and no sustained arcing occurs. (IEC 60335-2-9)		P
19.102	Toasters: test with the ejector mechanism locked (IEC 60335-2-9)		P
20	STABILITY AND MECHANICAL HAZARDS		--
20.1	Appliances having adequate stability		P
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		P
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		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		P
	For appliances intended for outdoor use, the impact energy is 0.7J (IEC 60335-2-9)		N/A
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
	Appliances incorporates visibly glowing heating elements located at the top of the oven and accessible to the test probe 41 of IEC 61032 (IEC 60335-2-9)		N/A
	Appliances incorporates visibly glowing heating elements located elsewhere in the oven and accessible to the test probe B of IEC 61032 (IEC 60335-2-9)		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 0,70J ± 0,05 J. (IEC 60335-2-9)		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
21.101	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
	After the tests, surface of hotplate not broken (IEC 60335-2-9).		N/A
	Withstand dielectric strength test of 16.3 (IEC 60335-2-9).		N/A
22	CONSTRUCTION		--
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
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	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 push for all parts 50N pull for enclosure and timer knob 30N pull for switch button 2Nm for timer knob	P
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied	Timer knob, switch button	P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	Handle	P
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		P
22.18	Current-carrying parts and other metal parts resistant to corrosion		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		P
	Heating elements constructed or supported so they are unlikely to become displaced in normal use. (IEC 60335-2-9)		P
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		P

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
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
	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		P
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Insulating 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
22.34	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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	This requirement does not apply to handles, levers and knobs on stationary 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
22.41	No components, other than lamps, containing mercury		P
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
22.105	Appliances have not openings on the underside that would allow small items to penetrate and touch live parts. (IEC 60335-2-9)		P
	Distance measured between the supporting surface and live parts through openings (IEC 60335-2-9)		P
	Distance requested as specified: .(IEC 60335-2-9)	>20mm	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
23.5	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		P
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
23.7	The colour combination green/yellow only used for earthing conductors		P
23.8	Aluminium wires not used for internal wiring		P

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
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
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
	Impulse voltage test is not applicable:		--
	- when the microenvironment is pollution degree 3, or		P
	- for basic insulation of class 0 and class 01 appliances		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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings considered to be bare conductors		N/A
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		P
	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		N/A
	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:		--
	- 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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from Clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree.....:	(see appended table)	P
	Pollution degree 2 applies, unless		N/A
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- insulation subjected to conductive pollution; pollution degree 3		P
	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
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(see appended table)	P

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17.....:		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 .....:		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or .....:	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable .....:		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or .....:	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable .....:		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18.....:		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		--
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- 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
	- 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

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
	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
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consist of at least 2 layers		N/A
	Reinforced insulation consist of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N/A
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19.....:		N/A
30	RESISTANCE TO HEAT AND FIRE		--
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	parts of thermoplastic material providing supplementary or reinforced insulation		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C).....:	(see appended table)	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)	P
	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)	N/A
	Temperature rises occurring during the test of 19.102 are not taken into account (IEC 60335-2-9)		P

IEC 60335-2-9			
Clause	Requirement - Test	Result - Remark	Verdict
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of Annex E		P
	Test not applicable to conditions as specified .....:		N/A

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

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	dP (W, %)	Required dP (W, %)	Remark
TM-2019	650	633	-2,6%	-10%~+5%	Supplied at 220V
	750	754	+0,5%	-10%~+5%	Supplied at 240V
TM-2020T	650	635	-2,3%	-10%~+5%	Supplied at 220V
	750	754	+0,5%	-10%~+5%	Supplied at 240V
Supplementary information: Tests have been done under both 50Hz and 60Hz, the most unfavourable data was recorded.					

11.8	TABLE: Heating test, thermocouples (TM-2019)		P
	Test voltage (V) .....:	260,4	—
	Ambient (°C) .....:	24,2	—

Thermocouple locations	dT (K)	Max. dT (K)
Power cord	9,8	50
Internal wire	154,2	175(T200)
Insulation sleeve	95,3	175(T200)
Bobbin of winding	52,5	--
Main PCB	36,5	120
Button of spring swtich	4,1	60
Internal enclosure	20,8	--
Knob of rotary switch	5,6	60
20mm around the rotary switch	17,5	60
Metal surface	9,3	35
Test corner	1,8	65

11.8	TABLE: Heating test, thermocouples (TM-2020T)		P
	Test voltage (V) .....:	257,2	—
	Ambient (°C) .....:	22,2	—

Thermocouple locations	dT (K)	Max. dT (K)
Power cord	12,2	50
Internal wire	147,6	175(T200)
Insulation sleeve	100,8	175(T200)

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

Bobbin of winding	77,7	--
Main PCB	46,7	120
Button of spring swtich	9,7	60
Internal enclosure	57,9	--
Knob of rotary switch	7,6	60
20mm around the rotary switch	18,3	60
Metal surface	10,2	35
Test corner	4,0	65

11.8	**TABLE: Heating test, resistance method (TM-2019)**				P
	Test voltage (V) .....:	257,8			—
	Ambient, t_1 (°C) .....:	24,2			—
	Ambient, t_2 (°C) .....:	24,2			—
Temperature rise of winding	R_1 (Ω)	R_2 (Ω)	dT (K)	Max. dT (K)	Insulation class
Magnetic coil winding	61,9	77,2	63,9	90	120

11.8	**TABLE: Heating test, resistance method (TM-2020T)**				P
	Test voltage (V) .....:	257,3			—
	Ambient, t_1 (°C) .....:	22,2			—
	Ambient, t_2 (°C) .....:	22,2			—
Temperature rise of winding	R_1 (Ω)	R_2 (Ω)	dT (K)	Max. dT (K)	Insulation class
Magnetic coil winding	61,5	81,4	83,1	90	120

13.2	**TABLE: Leakage current for TM-2019 and TM-2020T**		P
	Heating appliances: 1.15 x rated input .....:	For TM-2019 and TM-2020T: 862,5W	—
	Motor-operated and combined appliances: 1.06 x rated voltage.....:	N/A	—
Leakage current between		I (mA)	Max. allowed I (mA)
L/N – Earthing metal parts		0,114	0,75
L/N – Enclosure (with metal foil or ungrounded metal parts)		0,058	0,35 peak
L/N – Switch/knob/handle		0,064	0,35 peak
supplementary information:			

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

13.3	TABLE: Electric strength for TM-2019 and TM-2020T		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Internal wire – Earthing metal parts		1000	No
Internal wire – Enclosure (with metal foil or ungrounded metal parts)		1750	No
Internal wire – Switch/knob/handle		3000	No

16.2	TABLE: Leakage current for TM-2019 and TM-2020T		P
	Single phase appliances: 1.06 x rated voltage .....:	254,4V	—
	Three phase appliances 1.06 x rated voltage divided by √3:.....:	N/A	—
Leakage current between		I (mA)	Max. allowed I (mA)
L/N – Earthing metal parts		0,143	0,75
L/N – Enclosure (with metal foil or ungrounded metal parts)		0,068	0,25
L/N – Handle		0,074	0,25

16.3	TABLE: Electric strength for TM-2019 and TM-2020T		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Internal wire – Earthing metal parts		1250	No
Internal wire – Enclosure (with metal foil or ungrounded metal parts)		1750	No
Internal wire – Switch/knob/handle		3000	No

19.13	TABLE: Abnormal operation, temperature rises (TM-2019)		P
Thermocouple locations		dT (K)	Max. dT (K)
Cl.19.2 & Cl.19.3			
Test corner		107,6	150
Supply cord		30,7	150
Enclosure		66,5	---
Bobbin of winding		97,1	---

19.13	TABLE: Abnormal operation, temperature rises (TM-2020T)		P
Thermocouple locations		dT (K)	Max. dT (K)
Cl.19.2 & Cl.19.3			

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

Test corner	77,0	150
Supply cord	32,4	150
Enclosure	104,9	---
Bobbin of winding	114,1	---

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

Supplementary information:

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

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

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

125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N/A
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	4,2	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	—	> 5,2	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	**8,0**	—	—	8,5	P
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>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

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

>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

Supplementary information:

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

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	Creepage distance (mm) Pollution degree							
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*)	Verdict / Remark
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A
50	0,16	0,56	0,8	1,0	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(3,4)
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

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Clause	Requirement - Test	Result - Remark	Verdict

>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A

Supplementary information:

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

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30	**TABLE: Resistance to heat and fire**																		
Object/ part No.	Manufacturer /trademark	Type/ model	Ball pressure test °C				Glow wire test (GWT) °C						Glow-wire flammability index (GWFI) °C				Glow- wire ignition temp. (GWIT) °C		Needle - flame test (NFT)	Verdict
			75	125	cl. 11 +40	cl. 19 +25	550	650 te	650 ti	750 te	750 ti	850	550	650	750	850	675	775		
Plastic enclosure	Refer to table 24.1	Refer to table 24.1				129,9℃ (1,1mm)	X													P
Bobbin of winding	Refer to table 24.1	Refer to table 24.1				139,1℃ (1,2mm)				NI	NI									P
PCB	Refer to table 24.1	Refer to table 24.1		1,1mm															X	P

Supplementary information:

[1] Parts of material classified at least HB40 or if relevant HBF
[2] Parts of material classified as V-0 or V-1
[3] Flame persisting longer than 2 s (= $t_e - t_i$) need only be reported for unattended appliances
[4] Surrounding parts subjected to the needle-flame test of annex E
[5] Base material classified as V-0 or if relevant VTM-0
[6] The GWIT pre-selection option, the 850 °C GWFI pre-selection option, and the 850 °C GWT are not applicable for attended appliances
[7] NI: No ignition

ATTACHMENT TO TEST REPORT IEC 60335-2-9 **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** Household and similar electrical appliances – Safety – Part 2: Particular requirements for grills, toasters and similar cooking appliances	
Differences according to.....:	EN 60335-2-9:2003 + A1:2004 + A2:2006 + A12: 2007 + A13:2010 used in conjunction with EN 60335-1:2012 and EN 62233:2008
Attachment Form No.....:	EU_GD_IEC60335_2_9H
Attachment Originator .....:	Eurofins
Master Attachment.....:	Date 2013-01-22

EN 62233			
Clause	Requirement + Test	Result - Remark	Verdict
EMF- ELECTROMAGNETICS FIELDS			
	The Tested product also complies to the requirements of EN 62233:2008		P
	Limit ……100%	Measured max. <10%	P

IEC60335_2_9H ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

	CENELEC COMMON MODIFICATIONS		
1	SCOPE		--
	(Replacement) As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in household and similar environments However, in general, it does not take into account: ● children playing with the appliance ● The use of the appliance by very young children ● The use of the appliance by young children without supervision It is recognized that very vulnerable people may have needs beyond the level addressed in this European Standard(EN 60335-2-9/A13)		P
6.1	Delete “class 0” and “class 01”		P
7	MARKING AND INSTRUCTIONS		--
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
	(addition) When footnote [b] of Table Z101 apply, the appliance shall be marked with: ● Symbol IEC60417-5041 ● CAUTION: hot surface(EN 60335-2-9/A13)		N/A
	The symbol or the warning shall be put on the surface of the appliance having the highest temperature and shall be visible during normal operation(EN 60335-2-9/A13)		N/A
7.10	Devices used to start/stop operational functions of the appliance distinguished from other manual devices by means of shape, size, surface texture, position, etc.		P
	An indication that the device has been operated is given by:		--
	• a tactile feedback, or		N/A
	• an audible and visual feedback		P
	(addition) Devices used to start/stop operational functions, shall be distinguished		P
7.12	The instructions include the substance of the following:		--

IEC60335_2_9H ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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		N/A
	(addition) The instructions shall include the substance as description(EN 60335-2-9/A13)		P
	These products can be used by children from 8 years and above and persons with reduced physical, sensory or mental abilities or a 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. (EN 60335-2-9/A13)		P
	Children shall not play with the appliance(EN 60335-2-9/A13)		P
	Cleaning and user maintenance shall not be made by children unless they are older than 8 and supervised. (EN 60335-2-9/A13)		P
	Keep the product and its cord out of the reach of children less than 8 years. (EN 60335-2-9/A13)		P
7.12.Z1	The specific instructions related to the safe operation of this appliance is collated together in the front section of the user instructions		P
	The height of the characters, measured on the capital letters, is at least 3 mm	Min. 4mm	P
	These instructions are also available in an alternative format, e.g. on a website		P
7.12.Z101	(addition) The instructions of the safe operation of appliance shall be collated together in the front section(EN 60335-2-9/A13)		P
	The height of the characters, shall be at least 4mm(EN 60335-2-9/A13)		P
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		--
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test		P

IEC60335_2_9H ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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
8.2	Compliance is checked by applying the test probes of EN 61032		P
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A
11	Heating		--
11.1	For ovens, rotary grills and cookers, compliance is also checked by the test of 11.Z101 (EN 60335-2-9)		N/A
	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills, griddles, compliance is also checked by the test of 11.Z102 (EN 60335-2-9)		N/A
	For breadmakers, compliance is also checked by the test of 11.Z103 .....(EN 60335-2-9)		N/A
	(Replacement) For oven, rotary grills, rotisseries and cookers, compliance is also checked by the test of 11.Z101(EN 60335-2-9/A13)		N/A
	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills, griddles, barbecues, hot plates, candy floss, popcorn makers, compliance is checked by the test of 11.Z102(EN 60335-2-9/A13)		N/A
	For breadmakers and food dehydrators, compliance is checked by the test of 11.Z103(EN 60335-2-9/A13)		N/A
	For toasters, compliance is also checked by the test of 11.Z104(EN 60335-2-9/A13)		P
	For roasters, compliance is checked by the test of 11.Z105(EN 60335-2-9/A13)		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		P

IEC60335_2_9H ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
11.3	For flat surfaces, temperature rises are measured using the probe of figure Z101(or any measuring instrument giving the same results), applied with a force of 4 N ± 1 N.....:(EN 60335-2-9)	4N	P
11.Z104	For toasters, the temperature rise limits in Table Z101 apply(EN 60335-2-9/A13)		P
	The appliance is operated 3 cycles at rated power and operated under normal operation(EN 60335-2-9/A13)		P
	Temperature rises are not measured on the temperature surfaces: (EN 60335-2-9/A13)		P
	the top side of top loaded appliances and surfaces within 25mm below the top surface(EN 60335-2-9/A13)		P
	Surfaces within 25mm in all direction of the hot functional surface(EN 60335-2-9/A13)		P
	Surfaces within 25mm from the ventilation openings(EN 60335-2-9/A13)		P
	Underside surfaces that are not accessible with test probe with test probe 41 of EN 61032(EN 60335-2-9/A13)		P
22	CONSTRUCTION		--
22.12	(addition) Add the end of the first sentence of the first paragraph ”including an ingestion or a choking hazard for vulnerable people” (EN 60335-2-9/A13)		P
ZZ	**ANNEX ZZ** (INFORMATIVE) **COVERAGE OF ESSENTIAL REQUIREMENTS OF EC DIRECTIVES**		--
	Description of the relation between this European standard and the LVD (Low Voltage Directive, 2006/95/EC) and the MD (Machinery Directive, 2006/42/EC)	The new Low Voltage Directive 2014/35/EU is applicable from 20 April 2016	P

11.Z104	TABLE: Temperature rise limits for surfaces (TM-2019)	
	Ambient (°C):	24,2
	Test voltage (V):	240,4
	dT (K)	Max. dT (K)
25mm around the hot functional surface	42,5	65
Metal surface	9,4	45

IEC60335_2_9H ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

11.Z104	TABLE: Temperature rise limits for surfaces (TM-2020T)		
	Ambient (°C):		22,2
	Test voltage (V):		240,1
		dT (K)	Max. dT (K)
25mm around the hot functional surface		40,2	65
Metal surface		11,1	45