

# **TEST REPORT IEC 60335-2-15**

# Safety of household and similar electrical appliances Part 2: Particular requirements for appliances for heating liquids

Report Number. ...... 28111130 001

**Date of issue** .....: 2018-01-17

Total number of pages...... 78

Applicant's name...... START-UP s.r.l.s

Address ....... via Carletto, 15 – 41013 Castelfranco Emilia (MO) – Italy

**Test specification:** 

Standard .....: IEC 60335-2-15:2002 (Fifth edition) + A1:2005 + A2:2008 in

conjunction with IEC 60335-1:2010 (Fifth Edition)

Test procedure ...... LVD

Non-standard test N/A

method....:

Test Report Form No.....: IEC60335\_2\_151

Test Report Form(s) Originator....: IMQ S.p.A.

Master TRF...... Dated 2012-03

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Test item description .....: Electric lunch box (food warmer)

Trade Mark ....:

(Spice)

Manufacturer.....: START-UP s.r.l.s (see name and address of factory on page 5)

Model/Type reference ...... Amarillo Inox SPP013

Ratings .....: 230V~ 50Hz 40W Class II

Testing procedure and testing location:			
Testing location/ address:	TÜV RHEINLAND ITAL	IA S.r.I.	
	Via E. Mattei, 3 - 20010	Pogliano Milanese (MI) - Italy	
Associated CB Laboratory:			
Testing location/ address			
Tested by (name + signature)	Andrea Lovati (Tester)	Novosi Oldne	
Approved by (name + signature):	Giovanni Molteni (Reviewer)	free feet	
☐ Testing procedure: TMP			
Testing location/ address:			
Tested by (name + signature)			
Approved by (name + signature)			
☐ Testing procedure: WMT			
Testing location/ address			
Tested by (name + signature)			
Witnessed by (name + signature)			
Approved by (name + signature)			
☐ Testing procedure: SMT			
Testing location/ address:			
Tested by (name + signature)			
Approved by (name + signature):			
Supervised by (name + signature)			
☐ Testing procedure: RMT			
Testing location/ address:			
Tested by (name + signature)			
Approved by (name + signature):			
Supervised by (name + signature)			

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

ANNEX 1: requirements of standard IEC 60335-1:2010/AMD1:2013 (12 pages)

**ANNEX 2:** European deviations (9 pages)

ANNEX 3: photo documentation (12 pages)

#### Summary of testing:

According to the manufacturer's request, the present test report is concerning partial tests regarding the specified appliance (see Test Item Description on the first page) and covers assessment of the following clauses in order to verify the compliance with the LVD Directive 2014/35/EU:

- §7 Marking and instructions
- §8 Protection against access to live parts
- §10 Power input
- §11 Heating (only for what concerning the temperature of heating element and wooden walls of cabinet)
- §13 Leakage current and electric strength at operating temperature
- §15 Moisture resistance
- §16 Leakage current and electric strength at operating temperature
- §19 Abnormal operation
- §23 Internal wirings
- §24 Components
- §25 Supply connection and external flexible cords

## Tests performed (name of test and test clause):

- §7 Marking and instructions
- §8 Protection against access to live parts
- §10 Power input
- §11 Heating (only for what concerning the

temperature of heating element and wooden walls of cabinet)

- §13 Leakage current and electric strength at operating temperature
- §15 Moisture resistance
- §16 Leakage current and electric strength at operating temperature
- §19 Abnormal operation
- §23 Internal wirings
- §24 Components
- §25 Supply connection and external flexible cords

# **Testing location:**

#### TÜV RHEINLAND ITALIA S.r.I.

Via E. Mattei, 3 - 20010 Pogliano Milanese (MI) - Italy

#### **Summary of compliance with National Differences**

## List of countries addressed: N/A

- The product fulfils the requirements of the following standards (only clauses above listed), with the exception of the non-conformities indicated into the present test report:
- IEC 60335 2 15:2002 (Fifth edition) + A1:2005 + A2:2008 in conjunction with IEC 60335-1:2010 (Fifth Edition) + A1:2013
- EN 60335-2-15:2002 + A1:2005 + A2:2008 + A11:2012 in conjunction with EN 60335-1:2012 + A11:2014

The product has already been tested and found to comply with the above standards (see test report no.LVD1406057, dated 2014-06-13, issued by Shenzhen Timeway Testing Laboratories).

# 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.



Test item particulars:		
Classification of installation and use:	portable appliance; Class II	
Supply Connection:	appliance inlet (cord set provided)	
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)	
- test case not checked:	N/C	
Testing:		
Date of receipt of test item:	2017-12-05 (storage no. 170685; items sampled and sent by applicant)	
Date (s) of performance of tests:	2018-01-15 up to 2018-01-16	
General remarks:  The test results presented in this report relate only this report shall not be reproduced, except in full, value and the latest and the latest and measurements are latest and measurements.	vithout the written approval of the Issuing testing in appended to the report. Is the report. Is sed as the decimal separator.	
Manufacturer's Declaration per sub-clause 6.2.5 of	ECEE 02:	
The application for obtaining a CB Test Certificate	Yes	
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		
When differences exist; they shall be identified in the	e General product information section.	
Name and address of factory (ies):	<b>Zhongshan Zhongxin Ornaments &amp; Gifts Factory</b>	
	Shunjing Building, Rd.2 Donghai, Dongfeng Town, Zhongshan City, Guangdong, China, 528425	
General product information:		
The appliance is an electric lunch box, designed to warr	n food.	
It's provided with appliance inlet and cord set (class II) for the connection to the supply mains, two PTC heating		

IEC 60335-2-15			
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.		Р
5.2	See Note 101 (IEC 60335-2-15:2002)		Р
5.3	The test of 19.101 is made after other tests (IEC 60335-2-15:2002)		N/A
5.101	Induction rice cookers, tested as motor-operated appliances (IEC 60335-2-15/A2:2008)		N/A
6	CLASSIFICATION	1	
6.1	Protection against electric shock: Class 0, 0I, I, II, III	Class II	Р
6.2	Protection against harmful ingress of water	IPX0	Р
	Wash boilers and livestock feed boilers shall be at least IPX3 (IEC 60335-2-15:2002)		N/A
7	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V):	230	Р
	Symbol for nature of supply, or	~	Р
	Rated frequency (Hz)	50	Р
	Rated power input (W), or	40	Р
	Rated current (A)		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark:	Trademark:  (Spice)  Responsible vendor:  START-UP s.r.l.s	Р
	Model or type reference:	Amarillo Inox SPP013	Р
	Symbol IEC 60417-5172, for class II appliances		Р
	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 hosesets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Appliances intended to be partially immersed in water for cleaning, marked with the maximum level of immersion and with the substance of the following: "Do not immerse beyond this level" (IEC 60335-2-15:2002)		N/A
	For kettles: level mark or other means which indicate the rated capacity (IEC 60335-2-15:2002)		N/A
	Unless they cannot be filled beyond their rated capacity (IEC 60335-2-15:2002)		N/A
	Mark outside of the kettle if the level is not self- evident (IEC 60335-2-15:2002)		N/A
	Marking on the appliance of the closed position of the lid of pressure cooker, if it is not obvious (IEC 60335-2-15:2002)		N/A
	Identification mark and model or type reference of stand for cordless kettles (IEC 60335-2-15:2002)		N/A
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		N/A
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages, the voltage setting is clearly discernible		N/A
	Requirement met if frequent changes are not required and the rated voltage 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 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		N/A
7.6	Correct symbols used		F
	Symbol for nature of supply placed next to rated voltage		Р

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Symbol for class II appliances placed unlikely to be confused with other marking		Р
	Units of physical quantities and their symbols according to international standardized system		Р
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 as follows:	on to the supply mains indicated	
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		N/A
	- marking not placed on removable parts		N/A
7.9	Marking or placing of switches which may cause a hazard	no switches	N/A
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means:	no switches	N/A
	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	no controls	N/A
7.12	Instructions for safe use provided		Р
	Details concerning precautions during user maintenance		Р
	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	modified according to EN standards	Р
	- children being supervised not to play with the appliance		Р

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	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
	Appliance incorporating an appliance inlet and intend cleaning, instructions include the following: (IEC 603		
	- the connector must be remove before cleaning	appliance not intended to be immersed for cleaning	N/A
	- the appliance inlet must be dried before the appliance is used again		N/A
	The instructions for use for appliances intended to be used with a connector incorporating a thermostat, state that only the appropriate connector must be used (IEC 60335-2-15:2002)	no connector incorporating thermostat	N/A
	Unless, kettles are constructed so that a hazard can being ejected, the instructions for use include the following		
	- if the kettle is overfilled, boiling water may be ejected		N/A
	The instructions for use for kettles filled through a lid below the handle, include the substance of the follow		
	- Warning: "Position the lid so that steam is directed away from the handle"		N/A
	- Warning: "Do not remove the lid while the water is boiling"		N/A
	Instructions for cordless kettles state that the kettle is only to be used with the stand provided (IEC 60335-2-15:2002)		N/A
	If the kettle and stand of cordless kettles can be lifted handle of the kettle, the instructions for use include the (IEC 60335-2-15:2002)		
	- "Caution - Ensure that the kettle is switched off before removing it from its stand"		N/A
	Instructions for feeding bottle heaters:		
	- state that the food should not be heated for too long a period		N/A
	- state how to check that the correct food temperature has not been exceeded		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	The instructions for use for appliances normally cleaned after use and not intended to be immersed in water for cleaning, state that the appliance must not be immersed (IEC 60335-2-15:2002)		Р
	Instruction for pressure cooker : (IEC 60335-2-15:200	02)	
	- state that the ducts in the pressure regulator allowing the escape of steam should be checked regularly to ensure that they are not blocked		N/A
	- give details of how to open the container safely, and		N/A
	- state that the container must not be opened until the pressure has decreased sufficiently		N/A
	The instructions for use for egg boilers provided with substance of the following: (IEC 60335-2-15:2002)	a pricking device contain the	
	- Caution: "Avoid injuries from the egg pricker"		N/A
	Instructions for espresso coffee-makers incorporating by the user: (IEC 60335-2-15:2002)	g a pressurized reservoir filled	
	- contain information for the safe refilling of the water reservoir and the substance of the following: (IEC 60335-2-15/A1:2005)		N/A
	- WARNING: The filling aperture must not be opened during use		N/A
	The instructions including the substance of the follow	ing: (IEC 60335-2-15/A2:2008)	
	This appliance is intended to be used in household at	nd similar applications as:	
	- staff kitchen areas in shops, offices and other working environments		Р
	- farm houses		Р
	- by clients in hotels, motels and other residential type environments		Р
	- bed and breakfast type environments		Р
7.12.1	Sufficient details for installation supplied		N/A
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		N/A
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

	IEC 60335-2-15			
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:			
	- dimensions of space		N/A	
	- dimensions and position of supporting and fixing		N/A	
	- minimum distances between parts and surrounding structure		N/A	
	- minimum dimensions of ventilating openings and arrangement		N/A	
	- connection to supply mains and interconnection of separate components		N/A	
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N/A	
	a switch complying with 24.3		N/A	
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		N/A	
7.12.8	Instructions for appliances connected to the water m	ains:		
	- 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	
7.13	Instructions and other texts in an official language	IT - EN - ES - FR - D	Р	
7.14	Marking clearly legible and durable, rubbing test as specified		Р	
7.15	Markings on a main part		Р	
	Marking clearly discernible from the outside, if necessary after removal of a cover		N/A	

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	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		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	3	
8.1	Adequate protection against accidental contact with live parts		Р
8.1.1	Requirement applies for all positions, detachable parts removed		Р
	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		Р
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
	See Note 101 (IEC 60335-2-15:2002)		Р
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
8.1.4	Accessible part not considered live if:		
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V		N/A
	- safety extra-low d.c. voltage: not exceeding 42.4 V		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- or separated from live parts by protective impedance		N/A
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0.7 mA		N/A
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 $\mu\text{F}$		N/A
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC		N/A
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		N/A
8.1.5	Live parts protected at least by basic insulation before	re installation or assembly:	
	- built-in appliances		N/A
	- fixed appliances		N/A
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		F
	Only possible to touch parts separated from live parts by double or reinforced insulation	see also sub-clause 23.5 of std. IEC 60335-1/AMD1:2013	F
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)	Р
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2:	(see appended table)	N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated current is related to the arithmetic mean value of the range		N/A
11	HEATING		

	IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict	
11.1	No excessive temperatures in normal use		Р	
11.2	The appliance is held, placed or fixed in position as described:		N/A	
	Portable appliances are tested away from the walls of the test corner (IEC 60335-2-15:2002)		Р	
11.3	Temperature rises, other than of windings, determined by thermocouples		Р	
	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		N/A	
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W):	√1,15 x 230V = 246,6V (PTC heating elements)	Р	
	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 60335-2-15:2002)		N/A	
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)		N/A	
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V)		N/A	
	Combined appliances are tested as heating appliances (IEC 60335-2-15:2002)		N/A	
11.7	Appliances are operated for the duration specified in 11.7.101 to 11.7.105 (IEC 60335-2-15:2002)	until steady conditions	Р	
11.7.101	For kettles with temperature limiter: test terminated after second operation of temperature limiter (IEC 60335-2-15:2002)		N/A	
	For kettles with thermostat: test terminated 15 min after the water has attained 95 °C and 5 min after for others kettles		N/A	
11.7.102	For cooking pans, egg boilers, feeding-bottle heaters boilers, milk heaters, sterilizers, wash boilers and for than kettles, the fest is terminated: (IEC 60335-2-15/	appliances that boil water other		
	- appliances without a thermal control, 15 min after the water in the container has attained a temperature of 95 °C or the maximum temperature it can attain if this is lower		N/A	

	IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict	
	- portable appliances : 15 min after the thermal control has operated for the first time		N/A	
	- fixed appliances : 30 min after the thermal control has operated for the first time		N/A	
	- appliances with acoustic signal : 1 min after signal		N/A	
	For appliances having heated surface for keeping the liquid warm: also until steady conditions with and without the container		Р	
11.7.103	Slow cookers, rice cookers, steam cookers and yoghurt makers are operated until steady conditions are established (IEC 60335-2-15:2002)		N/A	
	Slow cookers are prewarmed in the dry state if this instruction is given		N/A	
11.7.104	Espresso coffee-makers are operated in accordance with the instructions for use (IEC 60335-2-15:2002)		N/A	
	Automatic espresso coffee makers and espresso coffee makers, the brewing period is the time necessary to produce the maximum quantity of coffee allowed by the timer or by the capacity of the coffee pot (IEC 60335-2-15/A2:2008)		N/A	
	Manual espresso coffee makers, maximum quantity of coffee to be produced specified in the instructions, or (IEC 60335-2-15/A2:2008)		N/A	
	the brewing period is the time necessary to produce 100 ml of coffee for each cycle (IEC 60335-2-15/A2:2008)		N/A	
	Espresso coffee-makers having an outlet for supplying steam or hot water, the brewing period is immediately followed by a period during which the steam or water is supplied for the time stated in the instructions, or (IEC 60335-2-15/A2:2008)		N/A	
	- espresso coffee makers having an outlet for supplying steam, 1 min. (IEC 60335-2-15/A2:2008)		N/A	
	- espresso coffee makers having an outlet for supplying water, the time necessary to produce 100 ml of water (IEC 60335-2-15/A2:2008)		N/A	
11.7.105	Pressure cookers operated 15 min after attaining the maximum cooking pressure (IEC 60335-2-15:2002)		N/A	
11.8	Temperature rises monitored continuously and not exceeding the values in table 3:	(see appended table)	Р	

	IEC 60335-2-15		
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 60335-2-15:2002)		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 60335-2-15:2002)		N/A
	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	no sealing compound	N/A
	Protective devices do not operate, except	no protective devices	N/A
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH TEMPERATURE	AT OPERATING	
13.1	Leakage current not excessive and electric strength adequate		Р
	Heating appliances operated at 1.15 times the rated power input (W):	√1,15 x 230V = 246,6V (PTC heating elements)	Р
	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	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	For other appliances, a low impedance ammeter may be used		N/A
	Leakage current measurements:	(see appended table)	Р
13.3	The appliance is disconnected from the supply		Р
	Electric strength tests according to table 4:	(see appended table)	Р
	No breakdown during the tests		Р
14	TRANSIENT OVERVOLTAGES		
	Appliances withstand the transient over-voltages to which they may be subjected		N/A

IEC 60335-2-15			
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		
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance		Р
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529:	IPX0	N/A
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A

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Clause	Requirement - Test	Result - Remark	Verdict	
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A	
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A	
	Appliances with type X attachment fitted with a flexible cord as described		N/A	
	Detachable parts subjected to the relevant treatment with the main part		N/A	
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N/A	
15.2	Spillage of liquid does not affect the electrical insulation		Р	
	Appliances with type X attachment fitted with a flexible cord as described		N/A	
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A	
	The test is only carried out with the appliance connector in position (IEC 60335-2-15:2002)		Р	
	For cordless kettles, the test with the kettle on horizontal plane carried out with the kettle both on and off its stand (IEC 60335-2-15:2002)		N/A	
	For rice cookers, the test carried out with the rice container in place (IEC 60335-2-15/A2:2008)		N/A	
	In case of doubt, spillage tests carried out with the appliance deviating from the normal position by an angle not exceeding 5° (IEC 60335-2-15:2002)		Р	
	Detachable parts are removed		Р	
	Overfilling test with additional amount of water, over a period of 1 min (I):	0,251	Р	
	The appliance withstands the electric strength test of 16.3		Р	
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29		Р	
	Kettles that can be filled through the spout: additional overfilling test in conditions as specified (IEC 60335-2-15:2002, IEC 60335-2-15/A1:2005)		N/A	

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Clause	Requirement - Test	Result - Remark	Verdict
	For cordless kettles, the additional test carried out only with the cordless kettle off its stand, the kettle being replaced on its stand in order to carry out the electric strength test of 16.3 (IEC 60335-2-15:2002)		N/A
	Steam sterilizers : particular overfilling test in conditions as specified (IEC 60335-2-15/A1:2005)		N/A
	Espresso coffee makers provided with a removable coffee pot: particular overfilling test in conditions as specified (IEC 60335-2-15/A2:2008)		N/A
15.3	Appliances proof against humid conditions		Р
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		Р
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		Р
	Humidity test for 48 h in a humidity cabinet		Р
	Reassembly of those parts that may have been removed		Р
	The appliance withstands the tests of clause 16		Р
15.101	Appliances to be partially or completely immersed in water for cleaning sufficiently protected against effects of immersion (IEC 60335-2-15:2002)		N/A
	Compliance is checked by the tests as specified, which are carried out on three additional appliances (IEC 60335-2-15:2002)		N/A
	No trace of water on insulation which can result in reduction of creepage distances and clearance below values specified in 29		N/A
15.102	Connecting device of stands for cordless kettles not affected by water: particular electric strength test in conditions as specified (IEC 60335-2-15:2002)		N/A
	Compliance is checked by the test in conditions as specified (IEC 60335-2-15/A1:2005)		N/A
	Stand withstanding the test of 16.3 with voltage reduced to 2500 V for reinforced insulation (IEC 60335-2-15:2002)		N/A
15.103	Interior of rice cookers not affected by water (IEC 60335-2-15/A2:2008)		N/A
	Compliance is checked by the test as specified		N/A
	Rice cookers withstanding the electric strength test of 16.3		N/A
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
16.1	Leakage current not excessive and electric strength adequate		Р
	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		Р
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V):	1,06 x 230V = 243,8V	Р
	Three-phase appliances: test voltage 1.06 times rated voltage divided by $\sqrt{3}$ (V):		N/A
	Leakage current measurements:	(see appended table)	
	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)	Р
16.3	Electric strength tests according to table 7	(see appended table)	Р
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified	(see appended table)	Р
	No breakdown during the tests		Р
17	OVERLOAD PROTECTION OF TRANSFORMERS	AND ASSOCIATED CIRCUITS	N/C
19	ABNORMAL OPERATION		
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		Р
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe	(see appended table)	N/A
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		Р
	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

	IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict	
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		P	
	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		N/A	
	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		Р	
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A	
	Kettles are not subjected to the test of 19.2 (IEC 60335-2-15:2002)		N/A	
	Kettles also subjected to the test of 19.101, unless the appliance incorporates a non-self-resetting thermal cut-out, in order to comply with 19.4 (IEC 60335-2-15:2002)		N/A	
	Kettles for which compliance with 19.101 relies on the operation of a non-self-resetting thermal cut-out are subjected to the test of 19.102 (IEC 60335-2-15:2002)		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)	√0,85 x 230V = 212V (PTC heating elements)	Р	
	Appliances are placed as near as possible to the walls of the test corner (IEC 60335-2-15:2002)		Р	
	They are tested empty with lids open or closed whichever is the more unfavourable (IEC 60335-2-15:2002)		Р	
	Induction rice cookers operating under the conditions of clause 11 with the rice container empty (IEC 60335-2-15/A2:2008)		N/A	
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W)	√1,24 x 230V = 256V (PTC heating elements)	Р	

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Kettles are operated empty at 1.15 times rated power input (IEC 60335-2-15:2002)		N/A
	The test is carried out with the kettle filled with sufficient water to cover the heating element or if the heating element is not positioned inside the container, to a depth of 10 mm: (IEC 60335-2-15:2002)		N/A
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		N/A
	Pressure regulators of pressure cookers are rendered inoperative together with each protective device in turn (IEC 60335-2-15:2002)		N/A
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath		N/A
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N/A
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		Р
	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)	345V	P
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		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, unless		N/A
	capacitor is of class P2 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
	Other appliances supplied with rated voltage for a period as specified		N/A
	Espresso coffee-makers incorporating a pump are operated for a period of 5 min (IEC 60335-2-15:2002)		N/A
	Winding temperatures not exceeding values specified in table 8:	(see appended table)	N/A
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		N/A
	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		N/A

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Clause	Requirement - Test	Result - Remark	Verdict	
	- the appliance complies with the conditions specified in 19.13		N/A	
	- 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-circul considered to have withstood the particular test, provi 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 dimeeting both of the following conditions:	circuits or parts of circuits		
	- 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 of specified in clause 11, but supplied at rated voltage, of specified:			
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N/A	
	b) open circuit at the terminals of any component		N/A	
	c) short circuit of capacitors, unless		N/A	
	they comply with IEC 60384-14		N/A	
	d) short circuit of any two terminals of an electronic component, other than integrated circuits		N/A	
	This fault condition is not applied between the two circuits of an optocoupler		N/A	
	e) failure of triacs in the diode mode		N/A	
	f) failure of microprocessors and integrated circuits		N/A	
	g) failure of an electronic power switching device		N/A	
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		N/A	

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Clause	Requirement - Test	Result - Remark	Verdict
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to g) of 19.11.2		N/A
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,		N/A
	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode		N/A
	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		N/A
	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		N/A
	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		N/A
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		N/A
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		N/A
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		N/A
	Earthed heating elements in class I appliances disconnected		N/A
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		N/A
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		N/A
	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		N/A

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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		N/A
	The appliance continues to operate normally, or		N/A
	requires a manual operation to restart		N/A
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):		N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		Р
	Temperature rises not exceeding the values shown in table 9:	(see appended table)	Р
	Compliance with clause 8 not impaired		Р
	If the appliance can still be operated it complies with 20.2		N/A
	Insulation, other than of class III appliances or class contain live parts, withstands the electric strength tes specified in table 4:		
	- basic insulation (V):		N/A
	- supplementary insulation (V):		N/A
	- reinforced insulation (V):	3000	Р
	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		N/A
	The appliance does not undergo a dangerous malfunction, and		Р
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	Appliances tested with an electronic switch in the off mode:	position, or in the stand-by	
	- 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

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Clause	Requirement - Test Re	esult - Remark	Verdict
	If the appliance contains lids or doors that are controlled one of the interlocks may be released provided that:	d by one or more interlocks,	
	- 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 19.4, pressure relief devices of pressure cookers operate before pressure has reached 350 kPa (IEC 60335-2-15:2002)		N/A
	Temperature rise of windings of induction rice cookers not exceeding the values specified in 19.7 (IEC 60335-2-15/A2:2008)		N/A
	Induction rice cookers: the electric strength test is carried out immediately after switching off the appliance (IEC 60335-2-15/A2:2008)		N/A
19.101	Kettles operated empty at 0,85 times or 1,15 times rated power input, whichever is more unfavourable, thermal cut-out that operates during the test of 19.4 short circuited (IEC 60335-2-15:2002)		N/A
	During the test, any flames keep within the enclosure of the kettle and supporting surface does not ignite (IEC 60335-2-15:2002)		N/A
	After the test, live parts not be accessible (IEC 60335-2-15:2002)		N/A
19.102	Kettles incorporating two self-resetting thermal cut- outs operated with one of the thermal cut-out short circuited, empty at 0.85 or 1.15 times rated power input, whichever is most unfavourable (IEC 60335-2-15:2002)		N/A
	Within 2 s of the thermal cut-out operating, the kettle is filled with water having a temperature of 15 °C ± 5 °C. After 1 min, the kettle is emptied (IEC 60335-2-15:2002)		N/A
	The test is carried out 100 times (IEC 60335-2-15:2002)		N/A
19.103	Appliances with detachable liquid containers : automatic transfer of liquid from one container to another is liable and safe (IEC 60335-2-15:2002)		N/A
	Compliance is checked by the test as specified (IEC 60335-2-15:2002)		N/A
	After the test, the appliance withstands the tests of 16.3 and (IEC 60335-2-15:2002)		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	no trace of water on insulation which can result in reduction of creepage distances and clearances below values specified in clause 29 (IEC 60335-2-15:2002)		N/A
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited		N/A
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time		N/A
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		N/A
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		N/A
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied		N/A
20	STABILITY AND MECHANICAL HAZARDS	,	N/C
21	MECHANICAL STRENGTH		N/C
22	CONSTRUCTION		N/C
23	INTERNAL WIRING		
23.1	Wireways smooth and free from sharp edges		Р
	Wires protected against contact with burrs, cooling fins etc.		N/A
	Wire holes in metal well-rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		N/A
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		N/A
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	No damage after 10 000 flexings for conductors flexed during normal use, or		N/A
	100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		N/A
	Not more than 10% of the strands of any conductor broken, and		N/A
	not more than 30% for wiring supplying circuits that consume no more than 15W		N/A
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		Р
	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		Р
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or		F
	be such that it can only be removed by breaking or cutting		F
23.7	The colour combination green/yellow only used for earthing conductors		N/A
23.8	Aluminium wires not used for internal wiring		N/A
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		Р
	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		Р
	List of components:	(see appended table)	Р

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Clause	Requirement - Test	Result - Remark	Verdict
	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		N/A
	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		Р
	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		Р
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14		N/A
	If the capacitors have to be tested, they are tested according to Annex F		N/A
24.1.2	Safety isolating transformers complying with IEC 61558-2-6		N/A
	If they have to be tested, they are tested according to Annex G		N/A
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000		N/A
	If they have to be tested, they are tested according to Annex H		N/A
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N/A
	Switches incorporated in espresso coffee-makers for initiating brewing or steaming tested for 10 000 cycles (IEC 60335-2-15:2002)		N/A

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Clause	Requirement - Test	Result - Remark	Verdict	
24.1.4	Automatic controls complying with IEC 60730-1 with of cycles of operation being at least:	the relevant part 2. The number		
	- thermostats: 10 000		N/A	
	- temperature limiters: 1 000		N/A	
	- self-resetting thermal cut-outs: 300		N/A	
	- voltage maintained non-self-resetting 1 000 thermal cut-outs:		N/A	
	- other non-self-resetting thermal cut-outs: 30		N/A	
	- timers: 3 000		N/A	
	- energy regulators: 10 000		N/A	
	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited		N/A	
	Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D		N/A	
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A	
	Self-resetting thermal cut-outs required for compliance with the test of 19.101 are subjected to 3 000 cycles of operation (IEC 60335-2-15:2002)		N/A	
24.1.5	Appliance couplers complying with IEC 60320-1		Р	
	However, for appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N/A	
	Interconnection couplers complying with IEC 60320-2-2		N/A	
	Appliance couplers incorporating thermostats, thermal cut-outs or fuses in the connectors comply with IEC 60320-1, except that: (IEC 60335-2-15:2002)		N/A	
	- the earthing contact of connector is allowed to be accessible, if contact is not likely to be gripped during insertion or withdrawal of the connector		N/A	
	- the temperature required for the test of clause 18 is that measured on the pins of the appliance inlet during test of clause 11 of this standard		N/A	

IEC 60335-2-15				
Clause	Requirement - Test	Result - Remark	Verdict	
	- The breaking-capacity test of clause 19 carried out using the inlet of the appliance		N/A	
	- the temperature rise of current-carrying parts specified in clause 21 not determined		N/A	
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N/A	
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A	
24.1.8	The relevant standard for thermal links is IEC 60691		N/A	
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N/A	
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		N/A	
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance		N/A	
24.2	Appliances not fitted with:			
	- switches or automatic controls in flexible cords		Р	
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance	no such devices	Р	
	- thermal cut-outs that can be reset by soldering, unless	no thermal cut-out	Р	
	the solder has a melding point of at least 230 °C		N/A	
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A	
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A	
	See Note 101 (IEC 60335-2-15:2002)		N/A	

	IEC 60335-2-15		
Clause	Requirement - Test	Result - Remark	Verdict
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		N/A
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N/A
	In addition, the motors comply with the requirements of Annex I		N/A
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		N/A
	One or more of the following conditions are to be me	t:	
	- the capacitors are of class P2 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	Devices incorporated in appliance, other than kettles, in order to comply with 19.4 are non-self-resetting (IEC 60335-2-15:2002)		N/A
	However, self-resetting thermal cut-outs are allowed for fixed water boilers, if they have been tested for 10 000 cycles of operation		N/A
	Compliance is checked by inspection and during the test of 19.4		N/A

IEC 60335-2-15				
Clause	Requirement - Test	Result - Remark	Verdict	
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBL	E CORDS		
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:			
	- supply cord fitted with a plug,		N/A	
	<ul> <li>an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or</li> </ul>		Р	
	- pins for insertion into socket-outlets		N/A	
	Appliances incorporating an appliance inlet other than those standardized in IEC 60320-1 are supplied with a cord set (IEC 60335-2-15:2002)	cord set provided even if the appliance inlet is standardized	N/A	
25.2	Appliance not provided with more than one means of connection to the supply mains		Р	
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A	
25.3	Appliance intended to be permanently connected to the following means for connection to the supply main			
	- 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	

IEC 60335-2-15			
Clause	Requirement - Test Result - Remark	Verdict	
	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	N/A	
	- type Z attachment, if allowed in relevant part 2	N/A	
	Type Z attachment is allowed for egg boilers, feeding bottle heaters, yoghurt makers and stands of cordless kettles (IEC 60335-2-15:2002)	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	Р	
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	
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 88)	N/A	
	<ul> <li>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</li> </ul>		
	light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg  H03VV-F	Р	
	ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances	N/A	
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		
	heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg	N/A	
	heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances	N/A	
	Supply cords for class III appliances adequately insulated	N/A	

IEC 60335-2-15				
Clause	Requirement - Test	Result - Remark	Verdict	
	Test with 500 V for 2 min for supply cords of class		N/A	
	III appliances that contain live parts			
25.7	Supply cord of livestock feed boilers shall be polychloroprene sheathed (IEC 60335-2-15:2002)		N/A	
25.8	Nominal cross-sectional area of supply cords not	rated current: ≤0,2A	Р	
	less than table 11; rated current (A); cross-sectional area (mm²):	cross-sectional area: 2x0,5mm²		
		length of cable: 70cm		
	Portable appliances having a rated current of up to 10 A may incorporate a supply cord having a nominal cross-sectional area of 0,75 mm², if the length is less than 2 m (IEC 60335-2-15:2002)		N/A	
25.9	Supply cords not in contact with sharp points or edges		Р	
25.10	Supply cord of class I appliances have a green/yellow core for earthing		N/A	
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless		N/A	
	the contact pressure is provided by spring terminals		N/A	
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure		N/A	
25.13	Inlet openings so constructed as to prevent damage to the supply cord		N/A	
	If the enclosure at the inlet opening is not of insulating material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N/A	
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is		N/A	
	class 0, or		N/A	
	a class III appliance not containing live parts		N/A	
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A	
	Flexing test, as described:			
	- 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	

	IEC 60335-2-15					
Clause	Requirement - Test	Verdict				
	- 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		N/A			
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		N/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			
	Cord not damaged and max. 2 mm displacement of the cord		N/A			
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			

	IEC 60335-2-15		
Clause	Requirement - Test	Result - Remark	Verdict
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		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		N/A
25.18	Cord anchorages only accessible with the aid of a tool, or		N/A
	Constructed so that the cord can only be fitted with the aid of a tool		N/A
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	The insulated conductors of the supply cord for type Y and Z attachment additionally insulated from accessible metal parts		N/A
25.21	Space for supply cord for type X attachment or for co constructed:	nnection of fixed wiring	
	<ul> <li>to permit checking of conductors with respect to correct positioning and connection before fitting any cover</li> </ul>		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N/A
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A
25.22	Appliance inlets:		
	- live parts not accessible during insertion or removal		Р

	IEC 60335-2-15		
Clause	Requirement - Test	Result - Remark	Verdict
	Requirement not applicable to appliance inlets complying with IEC 60320-1		Р
	- connector can be inserted without difficulty		Р
	- the appliance is not supported by the connector		Р
	- 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
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected	N/A	
25.25	Dimensions of pins that are inserted into socket- outlets compatible with the dimensions of the relevant socket-outlet.		N/A
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N/A
25.101	Supply cords of kettles are not longer than 75 cm, unless they are helically coiled (IEC 60335-2-15:2002)		N/A
	If a cordless kettle has a cord storage facility, the length of the cord is measured after storing as much of the cord as possible		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		N/C
27	PROVISION FOR EARTHING		N/C
28	SCREWS AND CONNECTIONS		N/C
29	CLEARANCES, CREEPAGE DISTANCES AND SOI	LID INSULATION	N/C
30	RESISTANCE TO HEAT AND FIRE		N/C
31	RESISTANCE TO RUSTING		N/C
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		N/C
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		N/C

	IEC 60335-2-15	5		
Clause	Requirement - Test	Result - Remark	Verdict	
В	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES			
С	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS			
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		N/C	
Е	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		N/C	
F	ANNEX F (NORMATIVE) CAPACITORS		N/C	
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		N/C	
Н	ANNEX H (NORMATIVE) SWITCHES		N/C	
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT RATED VOLTAGE OF THE APPLIANCE	IS INADEQUATE FOR THE	N/C	
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		N/C	
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		N/C	
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CL DISTANCES	EARANCES AND CREEPAGE	N/C	
М	ANNEX M (NORMATIVE) POLLUTION DEGREE		N/C	
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		N/C	
0	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS	S OF CLAUSE 30	N/C	
Р	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			
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		N/C	

10.1	TABLE: Powe	ABLE: Power input deviation							
Input deviati	on of/at:	P rated (W)	P measured (W)	dP (W, %)	Required dP (W, %)				
Complete appliance @230V		40	40,5	+1,25%	±10%	Norr	nal load		
Supplement	ary information:								

11.8	TABLE: Heating test, thermocouple measurements						
	Test voltage (V):		$\sqrt{1,15}$ x 230V = 246,6V (PTC heating elements)		_		
	Ambient (°C)	:		22	_		
Thermoc	ouple locations	Max. temperature rise dT (K)	measured,	Max.temperature dT (K)	rise limit,		
Appliance inlet		42		45			
Internal wiring (near heating element) (T200)		37		175			
Enclosure (inside), near heating element)		36		§ 30.1			
Enclosure	e (external), lateral	27		65*			
Enclosure (external), top		46		65*			
Enclosure (external), handle		45		60			
Suppleme	Supplementary information: * according to table Z101						

13.2	TABLE: Leakage current			
	Heating appliances: 1.15 x rated input (W):	$\sqrt{1,15}$ x 230V = 246,6V (PTC heating elements)		_
	Motor-operated and combined appliances: 1.06 x rated voltage (V):			_
Leakage	current between	I (mA)	Max. allowe	ed I (mA)
L/N and accessible enclosure		0,01	0,35 p	eak
Suppleme	entary information:			

13.3	TABLE: Electric strength			
Test voltage	applied between:	Voltage (V)	Breakd (Yes/N	
L/N and acce	essible enclosure	3000	No	
Supplementa	ary information:			

16.2	TABLE: Leakage current				
	Single phase appliances: 1.06 x rated voltage (V)	1,06 x 230V = 243,8V		_	
	Three phase appliances 1.06 x rated voltage divided by $\sqrt{3}$ (V)			_	
Leakage cu	irrent between	I (mA)	Max. allowe	ed I (mA)	
L/N and accessible enclosure		0,01	0,25	5	
Supplemen	tary information:				

16.3	TABLE: Electric strength			
Test voltage applied between:		Voltage (V)	oltage (V) Breakdown (Yes/No)	
L/N and accessible enclosure		3000	No	
Supplementa	ary information:			

19	Abnormal o	Abnormal operation conditions						
Operationa	I characteristic	s	YE	ES/NO	NO Operational conditions			
Are there electronic circuits to control the appliance operation?		No	0					
Are there "o position?	off" or "stand-b	y"	No	O				
	nded operation esults in dange 1?		No	0				
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	$\sqrt{0.85} \times 230V$ = 212V, empty	no over- temperatur no hazard	es,	N/A	N/A	N/A	N/A	Р
19.3	$\sqrt{1,24} \times 230V$ = 256V, empty	no over- temperatur no hazard	es,	N/A	N/A	N/A	N/A	Р
19.4	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.5	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.6	working increased by 5% until 1,5 times	no over- temperatur no hazard	es,	N/A	N/A	N/A	N/A	Р
19.7	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.8	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.9	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.10	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.11.2	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.11.4.8	N/A	N/A		N/A	N/A	N/A	N/A	N/A
19.10X	N/A	N/A		N/A	N/A	N/A	N/A	N/A
Supplemen	tary informatio	n:						

19.13	TABLE: Abnormal operation	ABLE: Abnormal operation, temperature rises					
Thermocouple locations		Max. temperature rise Max.temperatu measured, dT (K) dT (F		se limit,			
Supply cord		10	150				
Walls, floor and ceiling		8	150				
Supplement	tary information:						

24.1 T	ABLE: Components in	nformation				Р
Object / part No	o. Manufacturer/ trademark	Type / model	Technical data	Standard		rk(s) of nformity <sup>1</sup> )
Plug	Zhongshan Hongchen Wire Co. Ltd.	HC-66	2,5A 250V	EN 50075	VD	E
Cable	Zhongshan Hongchen Wire Co. Ltd.	H03VV-F	2x0,5mm <sup>2</sup>	IEC 60227 HD 21	VD	E
Connector	Guangzhou Huan Qiu Electrical & Appliance Co. Ltd.	CB201	2,5A 250V	EN 60320	VD	E
Appliance inlet	Heavy Power Co. Ltd.	CE 2	2,5A 250V	EN 60320	VD	E
Heating eleme (n.2)	Dongguan City Bizhuo Metal Electronics Co. Ltd.	(unknown)	230VAC 25W	EN 60335-1 EN 60335-2-15		sted in bliance
Heat shrinkable sleeve tube	e (unknown)	VW-1	125°C 600V	EN 60335-1 EN 60335-2-15		sted in oliance
Plastic enclosure	(unknown)	H1315	V-1	EN 60335-1 EN 60335-2-15		sted in oliance
Insulation tape	(unknown)	(unknown)	125°C	EN 60335-1 EN 60335-2-15		sted in oliance

Supplementary information:

<sup>1)</sup> Provided evidence ensures the agreed level of compliance. See OD-CB2039.

#### List of test equipment used:

A completed list of used test equipment to be provided in the Test Report when a Manufacturer Testing Laboratory according to TMP or WMT has been used.

The list of test equipment is optional for SMTL and RMTL where quality system, verified by the NCB during the assessment, ensures appropriate document control system in place.

Other forms with a different layout but containing corresponding information are also acceptable.

TUV ID	DESCRIPTION	BRAND	MODEL	CALIBRATION DUE DATE
87010014	Unità Acquisizione Dati	Fluke	Hydra 2620A	10/05/2018
87010022	Multimetro da Banco	Agilent technologies	34401A	21/06/2018
87010027	Wattmetro Digitale Trifase	Yokogawa	WT 230 (760503-C2- F/EC)	03/10/2018
87010127	Unghia di Prova	ATS Galbusera	01.10	31/05/2021
87010130	Dito di Prova Ø 8,6	ATS Galbusera	01.14	28/04/2021
87010198	Cronometro digitale	Quantum	RS 440 9798	02/08/2018
87010211	Dito di Prova Articolato	ATS Galbusera	Art. 01.01	02/04/2018
87010270	Termoigrometro digitale	Comet system	T3511	01/11/2019
87020681	Termocoppia T (testa e coda)	TERSID	NN-24-TT	21/07/2018

N/A

	IEC 60335-2-15		
Clause	Requirement - Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		
7.1	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		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
7.8	- marking of functional earthing terminals (symbol IEC 60417-5018)		N/A
7.12	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
7.12.1	If different rated voltages or different rated frequencies are marked, the instructions state what action to be taken to adjust the appliance		N/A
7.15	The symbol IEC 60417-5018 placed next to the symbol IEC 60417-5172 or IEC 60417-5180		N/A
10	POWER INPUT AND CURRENT	1	
10.1	If the power input varies throughout the operating cycle and the maximum value of the power input exceeds, by a factor greater than two, the arithmetic mean value of the power input occurring during a representative period, the power input is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the power input is the arithmetic mean value		N/A
10.2	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period		N/A

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Otherwise the current is the arithmetic mean value

MOISTURE RESISTANCE

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013			
	IEC 60335-2-15		
Clause	Requirement - Test	Result - Remark	Verdict
15.2	Spillage of liquid does not affect the electrical insulation		Р
	Spillage solution comprising water containing approximately 1 % NaCl and 0,6 % rinsing agent		Р
19	ABNORMAL OPERATION	,	
19.7	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
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		N/A
	An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode		N/A
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling		N/A
	Earthed heating elements in class I appliances disconnected		N/A
22	CONSTRUCTION	,	
22.5	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/C
	The discharge test is then repeated three times, voltage not exceeding 34 V (V):		N/C
22.32	Ceramic and similar porous material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/C
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts, or		N/C
	unearthed metal parts separated from live parts by basic insulation only		N/C
	Electrodes not used for heating liquids		N/C
	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/C
	the reinforced insulation consists of at least 3 layers		N/C

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013				
	IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict	
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/C	
	the reinforced insulation consists of at least 3 layers		N/C	
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/C	
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/C	
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N/C	
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N/C	
23	INTERNAL WIRING			
23.5	For class II construction, the requirements for supplementary insulation and reinforced insulation apply,		F	
	except that the sheath of a cord complying with IEC 60227 or IEC 60245 may provide supplementary insulation.		F	
	A single layer of internal wiring insulation does not provide reinforced insulation		F	
24	COMPONENTS			
24.1	Components comply with safety requirements in relevant IEC standards		Р	
	List of components:		Р	
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		N/A	
	Relays tested as part of the appliance, or		N/A	
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		N/A	
	The requirements of Clause 29 apply between live parts of components and accessible parts of the appliance		Р	
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard		Р	

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013					
	IEC 60335-2-15				
Clause	Requirement - Test	Result - Remark	Verdict		
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections		P		
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2		Р		
	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		Р		
	If these conditions are not satisfied, the component is tested as part of the appliance.		Р		
	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		N/A		
	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		Р		
	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		Р		
24.1.2	Transformers in associated switch mode power supplies comply with Annex BB of IEC 61558-2-16		N/A		
	Safety isolating transformers comply with IEC 61558-2-6		N/A		

	IEC 60335-2-15		
Clause	Requirement - Test	Result - Remark	Verdic
	If they have to be tested, they are tested according to Annex G		N/A
24.1.4	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		Р
	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
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBL	E CORDS	
25.1	Appliance not intended for permanent connection to connection to the supply:	fixed wiring, means for	
	- 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
25.10	In multi-phase appliances, the colour of the neutral conductor of the supply cord is blue.		N/A
25.13	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
25.15	Pull and torque test of supply cord:		N/A
	- fixed appliances: pull 100 N; torque (not on automatic cord reel) (Nm):		N/A
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm):		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
	Cord not damaged and max. 2 mm displacement of the cord		N/A
25.20	The conductors of the supply cord for type Y and Z attachment insulated from accessible metal parts		N/A
27	PROVISION FOR EARTHING		
27.1	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

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013  IEC 60335-2-15				
27.2	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A	
27.3	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A	
27.4	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A	
27.5	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A	
27.6	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A	
29	CLEARANCES, CREEPAGE DISTANCES AND SOI	LID INSULATION		
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		N/C	
	Compliance checked:		N/C	
	- by measurement, in accordance with 29.3.1, or		N/C	
	- by an electric strength test in accordance with 29.3.2, or		N/C	
	- 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/C	
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/C	
	- 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/C	
	- 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/C	
	This requirement does not apply to the sheath of visibly glowing heating element inaccessible to test probe 41 of IEC 61032 (IEC 60335-2-6)		N/C	

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013						
	IEC 60335-2-15					
Clause	Requirement - Test Result - Remark	Verdict				
В	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES THAT ARE RECHARGED IN THE APPLIANCE					
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance	N/A				
	Three forms of construction covered:					
	a) Appliance supplied directly from the supply mains or a renewable energy source, the battery charging circuitry and other supply unit circuitry incorporated within the appliance	N/A				
	b) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the part of the appliance containing the battery	N/A				
	c) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the detachable supply unit	N/A				
3.1.9	Appliance operated under the following conditions:					
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2	N/A				
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate	N/A				
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2	N/A				
	- if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed	N/A				
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable	N/A				
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances	N/A				
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage (V) and polarity of the terminals:					

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013					
IEC 60335-2-15					
Clause	Requirement - Test	Result - Remark	Verdict		
	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:</model>		N/A		
7.6	Additional symbols		N/A		
7.12	The instructions give information regarding charging		N/A		
	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N/A		
	Details about how to remove batteries containing materials hazardous to the environment given		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:		N/A		
	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		

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013				
	IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict	
19.1	Appliances subjected to tests of 19.B.101, 19.B.102 and 19.B.103		N/A	
19.10	Not applicable		N/A	
19.B.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A	
19.B.102	For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged,		N/A	
19.B.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N/A	
19.13	The battery does not rupture or ignite		N/A	
21.B.101	Appliances having pins for insertion into socket- outlets have adequate mechanical strength		N/A	
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being:		N/A	
	- 100, if the mass of the part does not exceed 250 g (g)		N/A	
	- 50, if the mass of the part exceeds 250 g:		N/A	
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A	
22.3	Appliances having pins for insertion into socket- outlets tested as fully assembled as possible		N/A	
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts		N/A	
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A	
	For other parts, 30.2.2 applies		N/A	
Н	ANNEX H (NORMATIVE) SWITCHES			
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		N/A	
	Clause 20 is applicable to clearances across full disconnection and micro-disconnection		N/A	

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013					
	IEC 60335-2-15				
Clause	Requirement - Test	Result - Remark	Verdict		
	It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24		N/A		
S	ANNEX S (NORMATIVE) BATTERY OPERATED APPLIANCES POWERED BY NON-RECHARGEABLE OR NOT RECHARGED IN TH				
	The following modifications to this standard are applicable for battery-operated appliances where the batteries are either non-rechargeable (primary batteries), or		N/A		
	rechargeable batteries (secondary batteries) that are not recharged in the appliance		N/A		
5.8.1	If the supply terminals for the connection of the battery have no indication of polarity, the more unfavourable polarity is applied		N/A		
5.S.101	Appliances intended for use with a battery box are tested with the battery box supplied with the appliance or with the battery box recommended in the instructions		N/A		
5.S.102	Appliances are tested as motor-operated appliances.		N/A		
7.1	Appliances marked with the battery voltage (V) and the polarity of the terminals, unless:		N/A		
	the polarity is irrelevant		N/A		
	Appliances also marked with:				
	name, trade mark or identification mark of the manufacturer or responsible vendor:		N/A		
	- model or type reference:		N/A		
	- IP number according to degree of protection against ingress of water, other than IPX0::		N/A		
	- type reference of battery or batteries:		N/A		
	If relevant, the positive terminal is indicated by the symbol IEC 60417-5005 and the negative terminal by the symbol IEC 60417-5006		N/A		
	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		

ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013				
	IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict	
	how to remove and insert the batteries		N/A	
	<ul> <li>non-rechargeable batteries are not to be recharged</li> </ul>		N/A	
	<ul> <li>rechargeable batteries are to be removed from the appliance before being charged</li> </ul>		N/A	
	different types of batteries or new and used batteries are not to be mixed		N/A	
	<ul> <li>batteries are to be inserted with the correct polarity</li> </ul>		N/A	
	<ul> <li>exhausted batteries are to be removed from the appliance and safely disposed of</li> </ul>		N/A	
	<ul> <li>if the appliance is to be stored unused for a long period, the batteries are removed</li> </ul>		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			
	<ul> <li>0,55 and 1,0 times the battery voltage, if the appliance can be used with non-rechargeable batteries</li> </ul>		N/A	
	<ul> <li>- 0,75 and 1,0 times battery voltage, if the appliance is designed for use with rechargeable batteries only</li> </ul>		N/A	
	The values specified in Table S.101 for the internal resistance per cell of the battery is taken into account		N/A	
19.1	The tests are carried out with the battery fully charged unless otherwise specified		N/A	
19.13	The battery does not rupture or ignite		N/A	
19.S.101	Appliances are supplied with the voltage specified in 11.5. The supply terminals having an indication of polarity are connected to the opposite polarity, unless		N/A	
	such a connection is unlikely to occur due to the construction of the appliance		N/A	
19.S.102	For appliances with provision for multiple batteries, one or more of the batteries are reversed and the appliance is operated, if reversal of batteries is allowed by the construction		N/A	
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	

ANNEX 1:	ANNEX 1: requirements of std. IEC 60336-1/AMD1:2013				
	IEC 60335-2-15				
Clause	Requirement - Test	Result - Remark	Verdict		
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		

ANNEX 2: European Deviations				
IEC60335_2_15I - ATTACHMENT				
Clause	Requirement - Test		Result - Remark	Verdict

# ATTACHMENT TO TEST REPORT IEC 60335-2-15 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Household and similar electrical appliances - Safety -

Part 2-15: Particular requirements for appliances

for heating liquids

**Differences according to:** EN 60335-2-15:2002 + A1:2005 + A2:2008 + A11:2012 used in

conjunction with EN 60335-1:2012 EN 50366:2003 + A1:2006 or

EN 62233:2008

Attachment Form No.: EU\_GD\_IEC60335\_2\_15I

Attachment Originator: IMQ S.p.A.

Master Attachment: 2012-10

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ANNEX 2: European Deviations				
IEC60335_2_15I - ATTACHMENT				
Clause	Requirement - Test		Result - Remark	Verdict

	CENELEC COMMON MODIFICATIONS			
6.1	Delete "class 0" and "class 01"		Р	
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		Р	
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A	
	When the provisions of footnote b to Table Z101 app (EN 60335-2-15, A11:12)	olly, appliance marked with:		
	• the substance of "CAUTION: Hot surface", or		N/A	
	• symbol IEC 60417-5041		N/A	
	The warning is put on the surface of the appliance having the highest temperature and it is visible during normal operation		N/A	
7.10	Accessible switch required by 22.40 distinguished from other manual devices by means of shape, size, surface texture, position, etc. (EN 60335-2-15, A11:12)		N/A	
	An indication that the device has been operated is given by:			
	a tactile feedback, or		N/A	
	an audible and visual feedback		N/A	
	A selector switch with an off-position clearly identifiable is allowed (EN 60335-2-15, A11:12)		N/A	
	An ON/OFF switch, if any, is considered a suitable device to stop operational functions (EN 60335-2-15, A11:12)		N/A	
	A plug is not considered a suitable device to stop operational functions, as it can be difficult to be reached by vulnerable persons (EN 60335-2-15, A11:12)		N/A	
7.12	The instructions include the substance of the following:			
	- 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	see modifications by EN 60335-2-15	N/A	
	- children shall not play with the appliance		Р	

ANNEX 2	: European Deviations	
	IEC60335_2_15I - ATTACHMENT	
Clause	Requirement - Test Result - Remark	Verdict
	- cleaning and user maintenance shall not be made by children without supervision	Р
	The instructions for pressure cookers, glue pots with a water jacket, livestock feed boilers, sterilizers include the substance of the following: (EN 60335-2-15, A11:12)	
	This appliance shall not be used by children. Keep the appliance and its cord out of reach of children	Р
	The instructions for cooking pans, slow cookers, steam cookers, rice cookers, coffee-makers, kettles, egg boilers, milk heaters include the substance of the following: (EN 60335-2-15, A11:12)	
	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. Cleaning and user maintenance shall not be made by children unless they are older than 8 and supervised. Keep the appliance and its cord out of reach of children aged less than 8 years	N/A
	The instructions for feeding bottle heaters, yoghurt makers include the substance of the following: (EN 60335-2-15, A11:12)	
	This appliance can be used by children aged from 3 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Cleaning and user maintenance shall not be made by children unless they are aged from 8 years and above and supervised. Keep the appliance and its cord out of reach of children aged less than 3 years	N/A
	The instructions shall also include the substance of the following: (EN 60335-2-15, A11:12)	
	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 understand the hazards involved	Р
	Children shall not play with the appliance	Р
	If symbol IEC 60417-5041 is marked on the appliance, the instructions state that surfaces are liable to get hot during use (EN 60335-2-15, A11:12)	N/A
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	Р

	IEC60335_2_15I - ATTACHN	MENT	
Clause	Requirement - Test	Result - Remark	Verdict
	The height of the characters, measured on the capital letters, is at least 3 mm		Р
	These instructions are also available in an alternative format, e.g. on a website	instruction manual available on the website	Р
7.14	Height of symbol IEC 60417-5041, at least 8 mm (EN 60335-2-15, A11:12)		N/A
	Height of the warning "CAUTION. Hot surface", at least 4 mm (measured on the capital letters) (EN 60335-2-15, A11:12)		N/A
8.1.1	Also test probe 18 of EN 61032 is applied		Р
	The appliance being in every possible position during the test		Р
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		Р
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		Р
	parts intended to be removed for user maintenance are also not removed		Р
8.2	Compliance is checked by applying the test probes of EN 61032		Р
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A
11.8	In Table 3 the row "External enclosure of motor- operated appliances, expect handles held in normal use" replaced by Table Z101 (EN60335-2-15, A11:12)		Р
	Table Z101 added (EN 60335-2-15, A11:12)		Р
11.Z101	For coffee makers, milk heaters, egg boilers, cooking pans, slow cookers, steam cookers, pressure cookers, wash boilers, rice cookers, glue pots with a water jacket, livestock feed boilers, sterilizers, kettles and other appliances for boiling water, having a rated capacity not exceeding 10 I, the temperature rise limits in Table Z101 apply (EN 60335-2-15, A11:12)		P
	The appliance is supplied at rated voltage and operated under normal operation		Р
	Temperatures rises are not measured on:		
	• the lids		Р

IEC60335_2_15I - ATTACHMENT				
Clause	Requirement - Test	Result - Remark	Verdict	
	• surfaces within 25 mm from		Р	
	<ul><li>the edge of the lid</li><li>the ventilation openings</li></ul>			
	- the edge of the hot functional surface			
	enclosure at a distance within 25 mm from the heating element		N/A	
	underside surfaces that are not accessible with probe 41 of EN 61032		Р	
11.Z102	For feeding-bottle heaters and yoghurt makers the temperature rise limits in Table Z101 apply (EN 60335-2-15, A11:12)		N/A	
	The appliance is supplied at rated voltage and operated under normal operation		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	When using the test probe similar to test probe B with a circular stop face, the accessories and detachable covers are removed		N/C	
	Test probe 18 applied with a force of 2,5N on the appliance fully assembled		N/C	
22.40	Appliances except eggs boilers, feeding bottle heaters, yogurt makers and slow cookers, fitted with an accessible switch or other means to stop operational functions of the appliance (EN 60335-2-15, A11:12)		N/C	
24.1	Components comply with the safety requirements specified in the relevant standards as far as they reasonably apply		Р	
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance.		P	
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P	
	Components that have not been previously tested or do not comply with the standard for the relevant component are tested according to the requirements of 30.2		Р	

ANNEX 2: European Deviations			
	IEC60335_2_15I - ATTACHMENT		
Clause	Requirement - Test Result - Remark	Verdict	
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the standard for the relevant component need not be retested provided that:		
	- the severity specified in the component standard is not less than the severity specified in 30.2, and	Р	
	- the test report for the component states whether it complied with the standard for the relevant component with or without flame, flames not exceeding 2 s during the test are ignored	Р	
	Unless components have been previously tested and found to comply with the relevant standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9	N/A	
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant standard for the component are necessary other than those specified in 24.1.1 to 24.1.9	N/A	
	Components that have not been separately tested and found to comply with the relevant standard, and	Р	
	components that are not marked or not used in accordance with their marking,	Р	
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard	Р	
	Lamp holders and starter holders that have not been previously tested and found to comply with the relevant standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant standard under the conditions occurring in the appliance	N/A	
	Where the relevant standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used	N/A	
	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 IEC 60320-1,	N/A	
	if direct supply to these parts from the supply mains gives rise to a hazard	N/A	

ANNEX 2	: European Deviations			
IEC60335_2_15I - ATTACHMENT				
Clause	Requirement - Test	Result - Remark	Verdict	
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003		N/A	
	Compliance with Clause 8 of this standard is not impaired by connecting the appliance to a device covered by EN 41003		N/A	
24.Z1	For motor running capacitors (IEC 60252-1 type P2) with a metallic enclosure having an overpressure fuse the flame testing of internal plastic parts supporting current carrying connections as required in 30.2.2 and 30.2.3.1 is not necessary		N/A	
25.6	Supply cords of single-phase portable appliances ha exceeding 16 A, fitted with a plug complying with the IEC/TR 60083:			
	- for Class I appliances: standard sheet C2b, C3b or C4:		N/A	
	- for Class II appliances: standard sheet C5 or C6:		Р	
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors or when they are liable to be exposed to significant amount of ultraviolet radiation		N/A	
	Halogen-free thermoplastic compound sheathed sup least those of:	ply cords have properties at		
	halogen-free thermoplastic compound sheathed cords (H03Z1Z1H2-F or H03Z1Z1-F), for appliances having a mass not exceeding 3 kg		N/A	
	<ul> <li>halogen-free thermoplastic compound sheathed cords (H05Z1Z1H2-F or H05Z1Z1-F), for other appliances</li> </ul>		N/A	
	Cross-linked halogen-free compound sheathed supply cords have properties at least those of cross-linked halogen-free compound sheathed cords (H07ZZ-F)		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 unless they are held in place near the terminals independently of the solder		N/C	

ANNEX 2:	European Deviations		
	IEC60335_2_15I - ATTACHM	MENT	
Clause	Requirement - Test	Result - Remark	Verdict
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/C
32	Compliance regarding electromagnetic fields is checked according to EN 50366 or EN 62233		N/C
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/C
	The duration of the test is as specified in 19.7		N/C
ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS		N/C
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		N/C
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR AFINTENDED FOR COMMERCIAL USE	PPLIANCES AND MACHINES	N/C
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF F STANDARDS IN THE EN 60335 SERIES UNDER L		N/C
ZG	ANNEX ZG (NORMATIVE) UV APPLIANCES		N/C
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)	LVD (Low Voltage Directive, 2014/35/EC)	Р

ANNEX 2: European Deviations				
IEC60335_2_15I - ATTACHMENT				
Clause	Requirement - Test		Result - Remark	Verdict

Annex EN 50366:2003 + A1:2006				
Clause	Requirement + Test	Result - Remark	Verdict	
EMF- ELECTROMAGNETICS FIELDS				
	The tested product also complies with the requirements of EN 50366:2003 + A1:2006			
L	.imit100%	Measured max. :%	N/C	

Annex EN 62233:2008				
Clause	Requirement + Test	Result - Remark	Verdict	
EMF- ELECTROMAGNETICS FIELDS				
Т	The tested product also complies with the requirements of EN 62233:2008			
L	imit100%	Measured max. :%	N/C	

#### IEC60335\_2\_15I - ATTACHMENT

# Packaging



# Packaging



#### IEC60335\_2\_15I - ATTACHMENT

# Packaging



#### Top view



## IEC60335\_2\_15I - ATTACHMENT

## Front view



Signal lamp



## IEC60335\_2\_15I - ATTACHMENT

## Bottom view



# Appliance inlet



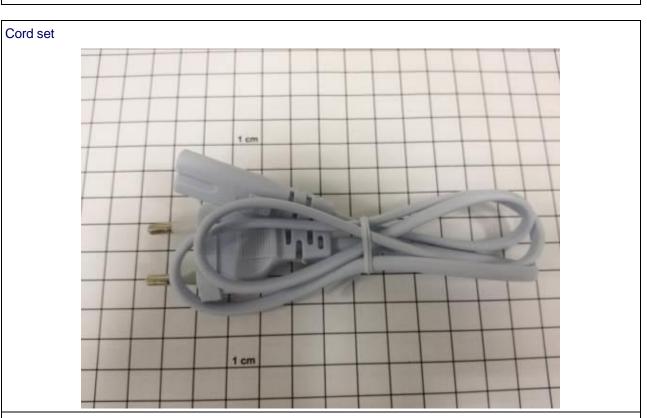
## IEC60335\_2\_15I - ATTACHMENT



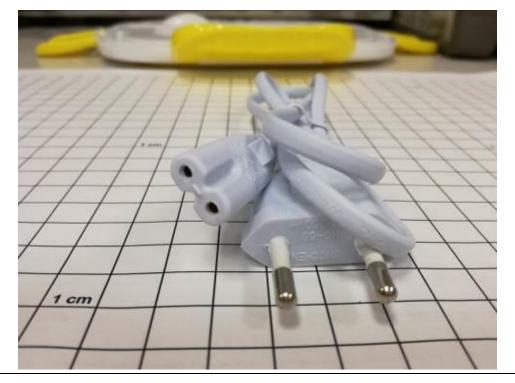
## Internal view (food containers)



## IEC60335\_2\_15I - ATTACHMENT







## IEC60335\_2\_15I - ATTACHMENT

## Internal view



# Internal components



## **IEC60335\_2\_15I - ATTACHMENT**

# Heating elements



Internal view (appliance inlet, internal wirings and lamp)



## IEC60335\_2\_15I - ATTACHMENT

After spillage test



After spillage test: trace of water cannot result in a reduction of distances



#### IEC60335\_2\_15I - ATTACHMENT

Electric strength test on the insulation of the internal wires



Voltage applied during electric strength test



## IEC60335\_2\_15I - ATTACHMENT

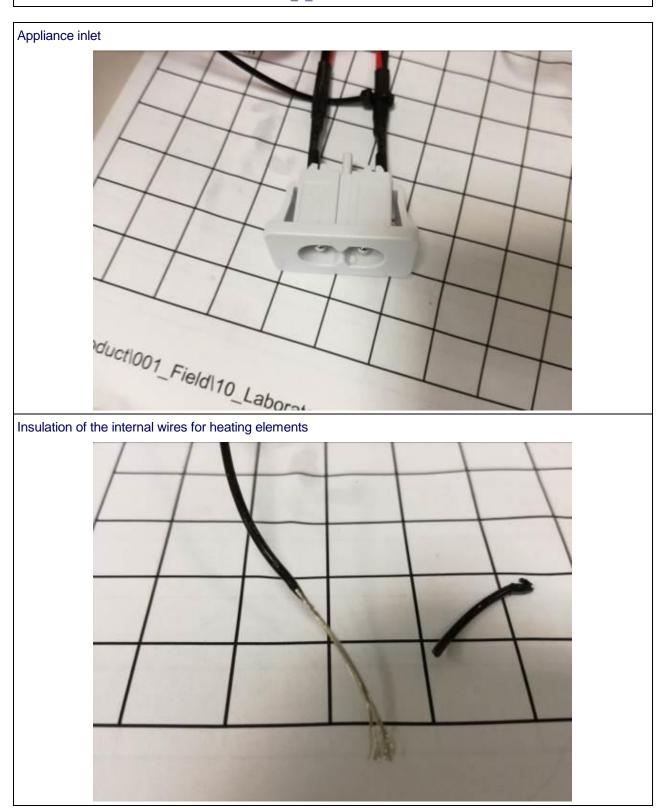
# Insulating tape



# Heating element



#### IEC60335\_2\_15I - ATTACHMENT



-END OF TEST REPORT-