

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

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

Report Number: 130628055GZU-001
Date of issue.....: 23 Oct., 2013, Amendment 1: 20 July, 2016
Total number of pages: Test report 98 pages (including 8 pages of photos)

Applicant's name.....: Shunde Kilon Electrical Co., Ltd.
Address: Xiqing Industrial Area, Longjiang Town, Shunde, Foshan, Guangdong, P. R. China

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: --
Non-standard test method.....: N/A

Test Report Form No......: IEC60335_2_15I
Test Report Form(s) Originator: IMQ S.p.A.
Master TRF: Dated 2012-03

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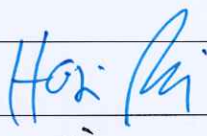

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Test item description: Steam cooker (Food Steamer)
Trade Mark: Kilon
Manufacturer: Shunde Kilon Electrical Co., Ltd.
Model/Type reference.....: KL-916, KL-916B, KL-916C, KL-916D, KL-912, **KL-912B, KL-912C, KL-912D**, KL-917, KL-919, **KL-919B**
Ratings: 220-240 V, 50/60 Hz, Class I;
For KL-916, KL-916B, KL-916C, KL-916D: 850 W
For KL-912, **KL-912B, KL-912C, KL-912D**, KL-917: 400-500 W
For KL-919, , **KL-919B**: 850-950 W



Testing procedure and testing location:		
<input checked="" type="checkbox"/>	Testing Laboratory:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Testing location/ address.....:		Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
<input type="checkbox"/>	Associated CB Laboratory:	
Testing location/ address.....:		
	Tested by (name + signature)	Haiti Bi/Project Engineer 
	Approved by (name + signature) ..	Win Qiu/Technical Manager 
<input type="checkbox"/>	Testing procedure: TMP	
Testing location/ address.....:		N/A
	Tested by (name + signature)	
	Approved by (name + signature) ..	
<input type="checkbox"/>	Testing procedure: WMT	
Testing location/ address.....:		N/A
	Tested by (name + signature)	
	Witnessed by (name + signature) ..	
	Approved by (name + signature) ..	
<input type="checkbox"/>	Testing procedure: SMT	
Testing location/ address.....:		N/A
	Tested by (name + signature)	
	Approved by (name + signature) ..	
	Supervised by (name + signature) :	
<input type="checkbox"/>	Testing procedure: RMT	
Testing location/ address.....:		N/A
	Tested by (name + signature)	
	Approved by (name + signature) ..	
	Supervised by (name + signature) :	



Summary of testing:

1. The submitted samples were tested and found to compliance with requirements of EN 60335-2-15:2002 + A1:2005 + A2:2008 +A11:2012+AC:2013 in conjunction with EN 60335-1: 2012 + AC: 2014 + A11: 2014.
2. The product has been tested and complied with the standard EN 62233:2008 for EMF.
3. The product has been evaluated and complied with the decision AfPS GS 2014:01 PAK

<p>Tests performed (name of test and test clause): See page 4.</p>	<p>Testing location: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China</p>
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Summary of compliance with National Differences:
EUROPEAN GROUP DIFFERENCES AND the following NATIONAL DIFFERENCES were considered : Germany, United Kingdom

Copy of marking plate

English	German
<p>Food Steamer Model: KL-919 220-240V 50/60 Hz 850-950W Shunde kilon electrical co., ltd</p> 	<p>FDAMPFKOCHER Modell: KL-919 220-240V 50/60 Hz 850-950W Shunde kilon electrical co., ltd</p> 

Remark: The markings for other models are identical with above except for the model name and rated power input

Test item particulars :

Classification of installation and use : Portable appliance and Household indoor use only

Supply Connection..... : Non detachable power cord with plug

..... :

Possible test case verdicts:

- test case does not apply to the test object..... : N/A
- test object does meet the requirement : P (Pass)
- test object does not meet the requirement : F (Fail)

Testing
Date of receipt of test item: 06 June, 2016
Date (s) of performance of tests: 06 June, 2016-16 July, 2016
General remarks:
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a comma is used as the decimal separator.</p> <p>When determining of test conclusion, measurement uncertainty of test has been considered. This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program. The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.</p>
Amendment 1:
This test report was appended to report 130628055GZU-001 (GS cert No.: 09GZH2535-02), because of the follow changes:
<ol style="list-style-type: none">Standard was upgraded to EN 60335-2-15:2002 + A1:2005 + A2:2008 +A11:2012+AC:2013 in conjunction with EN 60335-1: 2012 + A11: 2014+AC:2014;PAH was upgraded to AfPS GS 2014:01 PAKAdd new models KL-912B, KL-912C, KL-912D, KL-919B<ol style="list-style-type: none">KL-912B was identical to KL-912 except KL-912B with new heating element.KL-912C was identical to KL-912 except KL-912C with metal outer enclosure and different cord bushing which same as model KL-912D.KL-912D was identical to KL-912C except KL-912D with new heating element which was identical KL-912B.
For the above changed:
EN 60335-2-15/ AC: 2013 and EN 60335-1: 2012/A11: 2014+AC: 2014 were conducted. Clause 7, 8, 10, 11, 13, 19, 29 and construction review was performed on model KL-919B; Clause 7, 8, 10, 11, 13 and construction review were performed on model KL-912D; Clause 7 and construction review were performed on other models.
This test report is valid only in conjunction with test report 130628055GZU-001.
PAH test according to AfPS GS 2014:01 PAK is considered and passed, please refer to PAH test report 130628055GZU-PAH1 for details.

General product information:

Portable steam cooker for household indoor use only.

Requirement of Decision (EU) 2015/1143 has been considered

Model KL-916 and KL-916B are identical except the material of accessories.

Model KL-916C and KL-916D are identical except the material of accessories.

Model KL-916 and KL-916C are identical except that KL-916 is mechanical control panel and KL-916C is electric control panel.

Model KL-912, KL-916 and KL-919 are different on heating element and appearance.

Model KL-917 is identical with model KL-912 except the model name.

KL-912B was identical to KL-912 except KL-912B with new heating element.

KL-912C was identical to KL-912 except KL-912C with metal outer enclosure and different cord bushing which same as model KL-912D.

KL-912D was identical to KL-912C except KL-912D with new heating element which was identical KL-912B.

Manufacturing site: Shunde Kilon Electrical Co., Ltd.

Address: Xiqing Industrial Area, Longjiang Town, Shunde Foshan, Guangdong, China

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		--
7.1	Rated voltage or voltage range (V)..... :	220-240 V	P
	Symbol for nature of supply, or..... :		N/A
	Rated frequency (Hz) :	50/60 Hz	P
	Rated power input (W), or :	see page 1	P
	Rated current (A) :		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark..... :	Shunde Kilon Electrical Co., Ltd.	P
	Model or type reference..... :	see page 1	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0..... :	IPX0	N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only		N/A
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage		N/A
	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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		P
	Different rated values marked with the values separated by an oblique stroke		P
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		P
	the power input is related to the arithmetic mean value of the rated voltage range		P
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		P
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		P
	Symbol for class II appliances placed unlikely to be confused with other marking		N/A
	Units of physical quantities and their symbols according to international standardized system		P
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N/A
	correct mode of connection is obvious		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		--
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking not placed on removable parts		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
7.9	Marking or placing of switches which may cause a hazard		P
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means	Figures	P
	This applies also to switches which are part of a control		P
	If figures are used, the off position indicated by the figure 0		P
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		P
7.11	Indication for direction of adjustment of controls		P
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	The instructions state that:		--
	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction	Replaced by EN deviation	N/A
	- children being supervised not to play with the appliance	Replaced by EN deviation	N/A
	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 intended to be immersed for cleaning, instructions include the following : (IEC 60335-2-15:2002)		--
	- the connector must be remove before 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)		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Unless, kettles are constructed so that a hazard cannot arise from boiling water being ejected, the instructions for use include the following: (IEC 60335-2-15:2002)		--
	- if the kettle is overfilled, boiling water may be ejected		N/A
	The instructions for use for kettles filled through a lid aperture which is situated below the handle, include the substance of the following: (IEC 60335-2-15:2002)		N/A
	- 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 together by gripping the handle of the kettle, the instructions for use include the substance of the following: (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
	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)		P
	Instruction for pressure cooker : (IEC 60335-2-15:2002)		--
	- 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 a pricking device contain the substance of the following : (IEC 60335-2-15:2002)		--
	- Caution: "Avoid injuries from the egg pricker"		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Instructions for espresso coffee-makers incorporating a pressurized reservoir filled by the user: (IEC 60335-2-15:2002)		--
	- 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 following : (IEC 60335-2-15/A2:2008)		--
	This appliance is intended to be used in household and similar applications as:		P
	- staff kitchen areas in shops, offices and other working environments		P
	- farm houses		P
	- by clients in hotels, motels and other residential type environments		P
	- bed and breakfast type environments		P
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
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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- 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		P
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		--
	- max. inlet water pressure (Pa):		N/A
	- min. inlet water pressure, if necessary (Pa):		N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.13	Instructions and other texts in an official language	English and German	P
7.14	Marking clearly legible and durable, rubbing test as specified		P
7.15	Markings on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		P
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		--
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
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)		N/A
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements		N/A
8.1.4	Accessible part not considered live if:		--
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V		N/A
	- safety extra-low d.c. voltage: not exceeding 42.4 V		N/A
	- or separated from live parts by protective impedance		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 μF		N/A
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		--
	- built-in appliances		N/A
	- 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	Class II constructions	P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
10	POWER INPUT AND CURRENT		--
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1...:	(see appended table)	P
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		P
	the rated power input is related to the arithmetic mean value		P
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2.....:		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		--
11.1	No excessive temperatures in normal use		P
11.2	The appliance is held, placed or fixed in position as described.....:		P
	Portable appliances are tested away from the walls of the test corner (IEC 60335-2-15:2002)	Placed on the floor and away from the wall of test corner	P
11.3	Temperature rises, other than of windings, determined by thermocouples		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	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)	for KL-912D: 1,15 x 500 = 575 W for KL-919B: 1,15 x 950 = 1093 W	P
	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)		P
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, glue pots, livestock feed boilers, milk heaters, sterilizers, wash boilers and for appliances that boil water other than kettles, the test is terminated: (IEC 60335-2-15/A1:2005)		N/A
	- 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
	- 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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- 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		N/A
11.7.103	Slow cookers, rice cookers, steam cookers and yoghurt makers are operated until steady conditions are established (IEC 60335-2-15:2002)		P
	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
	Other coffee maker		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)	P
	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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	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		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		--
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times the rated power input (W):	for KL-912D: 1,15 x 500 = 575 W for KL-919B: 1,15 x 950 = 1093 W	P
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V):		N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		N/A
	For other appliances, a low impedance ammeter may be used		P
	Leakage current measurements:	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4:	(see appended table)	P
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		--

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Clause	Requirement - Test	Result - Remark	Verdict
	Appliances withstand the transient over-voltages to which they may be subjected		N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6:		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	IPX0	N/A
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529:	IPX0	N/A
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		N/A
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N/A
15.2	Spillage of liquid does not affect the electrical insulation		P
	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)		N/A
	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)		P
	Detachable parts are removed		P
	Overfilling test with additional amount of water, over a period of 1 min (l):	0,25 l	P

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Clause	Requirement - Test	Result - Remark	Verdict
	The appliance withstands the electric strength test of 16.3		P
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29		P
	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
	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
	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	25 °C, 93% R.H.	P
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		P
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		P
	Humidity test for 48 h in a humidity cabinet		P
	Reassembly of those parts that may have been removed		P
	The appliance withstands the tests of clause 16		P
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

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Clause	Requirement - Test	Result - Remark	Verdict
	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		--
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V):	240 x 1,06 = 254,4 V	P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by $\sqrt{3}$ (V):		N/A
	Leakage current measurements:	(see appended table)	P
	Limit values doubled if:		--
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified		N/A
16.3	Electric strength tests according to table 7.....:	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified	(see appended table)	P
	No breakdown during the tests		P
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		--

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Clause	Requirement - Test	Result - Remark	Verdict
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use		N/A
	Appliance supplied with 1.06 or 0.94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V)		N/A
	Basic insulation is not short-circuited		N/A
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		N/A
	Temperature of the winding not exceeding the value specified in table 8		N/A
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
19	ABNORMAL OPERATION		--
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe		P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		P
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		P
	if applicable, to the test of 19.5		P
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		N/A
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		P
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		P
	until steady conditions are established		P
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A
	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)	for KL-919B: 0,85 x 850 = 722 W	P
	Appliances are placed as near as possible to the walls of the test corner (IEC 60335-2-15:2002)		P
	They are tested empty with lids open or closed whichever is the more unfavourable (IEC 60335-2-15:2002)		P
	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)	for KL-919B: 1,24 x 950 = 1178 W	P
	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	Shorted circuited the thermostat, the thermal link operated.	P

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Clause	Requirement - Test	Result - Remark	Verdict
	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	Same result as clause 19.4	P
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath	Same result as clause 11	P
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N/A
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures (V)		N/A
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or		N/A
	locking moving parts of other appliances		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
	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		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
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		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	KL-912B, KL-912C, KL-912D, KL-919B were mechanical	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
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		--
	- the base material of the printed circuit board withstands the test of Annex E		N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		--
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified		N/A
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit		N/A
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		--
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		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

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Clause	Requirement - Test	Result - Remark	Verdict
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		N/A
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		P
	Temperature rises not exceeding the values shown in table 9:	(see appended table)	P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		--
	- basic insulation (V):	Live part & earthed metal 1000 V	P
	- supplementary insulation (V):	Internal wire & plastic enclosure 1750 V	P
	- reinforced insulation (V):	Live part & plastic enclosure 3000 V	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A

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Clause	Requirement - Test	Result - Remark	Verdict

	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		--
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		P
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		--
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- 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

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Clause	Requirement - Test	Result - Remark	Verdict
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
	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		P
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		N/A
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied		N/A
20	STABILITY AND MECHANICAL HAZARDS		--
20.1	Appliances having adequate stability	Not overturn	P
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		P
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		N/A
	Protective enclosures, guards and similar parts are non-detachable, and		N/A
	have adequate mechanical strength		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, by unexpected reclosure		N/A
	Not possible to touch dangerous moving parts with the test probe described		N/A
21	MECHANICAL STRENGTH		--
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J		P
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
	See Note 101 (IEC 60335-2-15:2002)		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
22	CONSTRUCTION		--
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IPX0	N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		--
	- a supply cord fitted with a plug, or		N/A
	- a switch complying with 24.3, or		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		N/A
	- an appliance inlet		N/A
	Single-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Pull force of 50N to each pin after the appliance has been placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless		N/A
	rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		P
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding 0,1µF, the appliance being disconnected from the supply at the instant of voltage peak		P
	Voltage not exceeding 34 V (V).....:	2 V	P
22.6	Electrical insulation not affected by condensing water or leaking liquid		P
	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks	Class II construction	P
	In case of doubt, test as described		N/A
22.6	Drain holes shall be at least 5 mm in diameter or 20 mm ² in area with a width of at least 3 mm (IEC 60335-2-15:2002)	5,5 mm in diameter	P
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Additional test for espresso coffee-maker : (IEC 60335-2-15:2002)		--
	Appliance operated with coffee filter blocked and any steam valve closed. The maximum pressure attained is measured, then the appliance is subjected to twice the measure pressure for 5 min (IEC 60335-2-15:2002)		N/A
	No rupture, no abnormal leakage; appliance fit for further use (IEC 60335-2-15:2002)		N/A
	Maximum pressure test with pressure limiting devices made ineffective (IEC 60335-2-15:2002)		N/A
	No explosion nor emission of dangerous jets of steam (IEC 60335-2-15:2002)		N/A
	Last test repeated in case of rupture of an intentionally weak part: the appliance shall be terminated in the same mode (IEC 60335-2-15:2002)		N/A
	All pressure regulators and pressure-relief devices of pressure cookers are rendered inoperative and lids closed. Pressure increased to six times the rated cooking pressure (IEC 60335-2-15:2002)		N/A
	No rupture of container (IEC 60335-2-15:2002)		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		N/A
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless	No oil	N/A
	the substance has adequate insulating properties		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N/A
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts	Enclosure fixed by screws	P
	Obvious locked position of snap-in devices used for fixing such parts		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described	Push: 50 N, Pull: 50 N for Enclosure	P
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied	Switch button	P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	knob	P
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		P
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N/A
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless	No such material	N/A
	impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		P
22.22	Appliances not containing asbestos	No asbestos used	P
22.23	Oils containing polychlorinated biphenyl (PCB) not used	No oils	N/A
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported		N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N/A
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		N/A
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N/A
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		N/A
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		P
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts		P
	Electrodes not used for heating liquids		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	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		P
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N/A
	they are separated from live parts by double or reinforced insulation		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		N/A
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury	No components containing mercury	P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
	Resistors checked by the test of 14.1 a) in IEC 60065		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P

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Clause	Requirement - Test	Result - Remark	Verdict
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		N/A
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		N/A
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		N/A
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		--
	- continuously, or		N/A
	- automatically, or		N/A
	- remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.101	Kettles constructed so that the lid does not fall off when water is poured out (IEC 60335-2-15:2002)		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Compliance is checked by the test as specified (IEC 60335-2-15:2002)		N/A
	Lid not fall off and water only emitted from the spout (IEC 60335-2-15:2002)		N/A
22.102	Kettles so constructed that there are no sudden jets of steam or hot water likely to expose the user to a hazard when the appliance is used as in normal use (IEC 60335-2-15:2002)		N/A
	Compliance is checked by inspection during the test of clause 11		N/A
22.103	Appliance coupler of cordless kettles constructed to withstand the stresses occurring during normal use (IEC 60335-2-15:2002)		N/A
	Kettle is inserted into and withdrawn from the stand 10 000 times (1,1 times the rated current) (10 times per min)		N/A
	The test is continued for a further 10 000 times without current flowing		N/A
	The kettle is suitable for further use and compliance with 8.1, 16.3, 27.5 and clause 29 not be impaired		N/A
22.104	Portable appliances in which water boil with a container greater than 3 l is filled to its rated capacity with the lid closed in accordance with instructions for use (IEC 60335-2-15:2002)		N/A
	The plane is slowly inclined to an angle of 25 ° ; if the appliance overturns, it is left in this position for 10 s and then returned to its normal position		N/A
	The rate of discharge of liquid does not exceed 16 l/min		N/A
22.105	Fixed appliances for boiling water constructed so that the container is always open to the atmosphere through an aperture of at least 5 mm in diameter or 20 mm ² in area with a width of at least 3 mm (IEC 60335-2-15:2002)		N/A
	Aperture not likely to be obstructed in normal use		N/A
	If the appliance has provisions for discharging steam or water overflowing, the discharge aperture shall be at the base of the appliance and discharge vertically downwards		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
22.106	Espresso coffee-maker: not possible to remove the filter by a simple operation while there is hazardous pressure within the container (IEC 60335-2-15:2002)		N/A
22.107	Pressure cookers incorporate a non-self-resetting pressure or temperature responsive pressure relief device (IEC 60335-2-15:2002)		N/A
22.108	Pressure cooker: not possible to remove the lid when the inner pressure is excessive (IEC 60335-2-15:2002)		N/A
	Pressure test at 4 kPa and 100 N		N/A
	No hazardous displacement of lid at removal		N/A
22.109	Feeding-bottle heater: visible or audible signal to indicate the end of the heating period (IEC 60335-2-15:2002)		N/A
22.110	Espresso coffee-makers, incorporating a pressurized reservoir filled by the user constructed so that there is no spillage of water or sudden jets of steam or hot water (IEC 60335-2-15/A1:2005)		N/A
	When removing the filling cap of the pressurized reservoir, before the cap is removed completely, the pressure relieves in a controlled manner		N/A
	Compliance is checked by inspection during the test of clause 11 and by removing the filling cap at the end of the test		N/A
23	INTERNAL WIRING		--
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well-rounded or provided with bushings		P
	Wiring effectively prevented from coming into contact with moving parts		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

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Clause	Requirement - Test	Result - Remark	Verdict
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use, or		N/A
	100 flexings for conductors flexed during user maintenance		N/A
	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		P
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		N/A
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or		P
	be such that it can only be removed by breaking or cutting		N/A
23.7	The colour combination green/yellow only used for earthing conductors		P
23.8	Aluminium wires not used for internal wiring		P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	COMPONENTS		--
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components:	(see appended table)	P
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		P
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	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		N/A
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	certificated capacitor	P
	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

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Clause	Requirement - Test	Result - Remark	Verdict
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 starting relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N/A
	Switches incorporated in espresso coffee-makers for initiating brewing or steaming tested for 10 000 cycles (IEC 60335-2-15:2002)		N/A
24.1.4	Automatic controls complying with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		--
	- thermostats: 10 000	Certified components	P
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		N/A
	- voltage maintained non-self-resetting thermal cut-outs: 1 000		N/A
	- other non-self-resetting thermal cut-outs: 30		N/A
	- timers: 3 000	Certified components	P
	- 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		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	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
	- 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	Certified components	P
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		P
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance		P
24.2	Appliances not fitted with:		--
	- switches or automatic controls in flexible cords		P

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Clause	Requirement - Test	Result - Remark	Verdict
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	- thermal cut-outs that can be reset by soldering, unless		P
	the solder has a melting point of at least 230 °C		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
	See Note 101 (IEC 60335-2-15:2002)		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		N/A
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N/A
	In addition, the motors comply with the requirements of Annex I		N/A
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		N/A
	One or more of the following conditions are to be met:		--

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

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Clause	Requirement - Test	Result - Remark	Verdict
	- a set of terminals allowing the connection of a flexible cord		N/A
	- a fitted supply cord		N/A
	- a set of supply leads accommodated in a suitable compartment		N/A
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm)		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29		N/A
25.5	Method for assembling the supply cord to the appliance:		--
	- type X attachment		N/A
	- type Y attachment		P
	- type Z attachment, if allowed in relevant part 2		N/A
	Type 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

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Clause	Requirement - Test	Result - Remark	Verdict
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		--
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 88)		N/A
	- polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11		--
	<ul style="list-style-type: none"> light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg 	H03VV-F, H05VV-F: every model was not exceeding 3 kg.	P
	<ul style="list-style-type: none"> 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		--
	<ul style="list-style-type: none"> heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg 		N/A
	<ul style="list-style-type: none"> heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances 		N/A
	Supply cords for class III appliances adequately insulated		N/A
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N/A
25.7	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 less than table 11; rated current (A); cross-sectional area (mm ²):	3G 0,75 mm ²	P
	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 mm ² , 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		P
25.10	Supply cord of class I appliances have a green/yellow core for earthing		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure		P
25.13	Inlet openings so constructed as to prevent damage to the supply cord		P
	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
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm)	Pull: 60 N; Torque: 0,25 Nm	P
	Cord not damaged and max. 2 mm displacement of the cord	0,2 mm	P
25.16	Cord anchorages for type X attachments constructed and located so that:		--
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of supply cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N/A
	they are separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N/A
	it is part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N/A
	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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals		N/A
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	Type Y	P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	Constructed so that the cord can only be fitted with the aid of a tool		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	Type Y	P
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		--
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N/A
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A
25.22	Appliance inlets:		--
	- live parts not accessible during insertion or removal		N/A
	Requirement not applicable to appliance inlets complying with IEC 60320-1		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	the supply cord is unlikely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except that:		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		--
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		N/A
	the connections are soldered		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Screws and nuts not used to fix any other component, except		N/A
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N/A
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		N/A
	Terminals fixed so that when the clamping means is tightened or loosened:		--
	- the terminal does not become loose		N/A
	- internal wiring is not subjected to stress		N/A
	- neither clearances nor creepage distances are reduced below the values in clause 29		N/A
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm)		N/A
	No deep or sharp indentations of the conductors		N/A
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and		N/A
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened		N/A
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	No contact between live parts and accessible metal parts and,		N/A
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm ²).....:		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		N/A
	conductors ends fitted with means suitable for screw terminals		N/A
	Pull test of 5 N to the connection		P
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	Type Y	P
	For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		N/A
27	PROVISION FOR EARTHING		--
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet	Class I	P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Class 0, II and III appliances have no provision for earthing		N/A
	Safety extra-low voltage circuits not earthed, unless		N/A
	protective extra-low voltage circuits		N/A
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm ² , and		N/A
	do not provide earthing continuity between different parts of the appliance, and		N/A
	conductors cannot be loosened without the aid of a tool		P
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		N/A
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		P
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		P
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		N/A
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N/A
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		P
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω).....:	Max: 0,05 Ω	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
28	SCREWS AND CONNECTIONS		--
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		P
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity		N/A
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		P
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		N/A
	For screws and nuts; torque-test as specified in table 14.....:	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material		N/A
	This requirement does not apply to electrical connections in circuits of appliances for which:		--
	<ul style="list-style-type: none"> 30.2.2 is applicable and that carry a current not exceeding 0,5 A 		N/A
	<ul style="list-style-type: none"> 30.2.3 is applicable and that carry a current not exceeding 0,2 A 		N/A
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		N/A
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N/A
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		--
	- in normal use,		N/A
	- during user maintenance,		N/A
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		N/A
	At least two screws being used for each connection providing earthing continuity, unless		N/A
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		P
	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or		N/A
	if an alternative earthing circuit is provided		N/A
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		--
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation.....		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		P
	Impulse voltage test is not applicable:		--
	- when the microenvironment is pollution degree 3, or		P
	- for basic insulation of class 0 and class 01 appliances		N/A
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable.....	(see appended table)	P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1	Heating element	P
	Lacquered conductors of windings considered to be bare conductors		N/A
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16:	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		P
29.1.4	Clearances for functional insulation are the largest values determined from:		--
	- table 16 based on the rated impulse voltage	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		--
	the microenvironment is pollution degree 3, or		P
	the distances can be affected by wear, distortion, movement of the parts or during assembly		P
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
	Lacquered conductors of windings considered to be bare conductors		N/A
	However, clearances at crossover points are not measured		N/A
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		--
	- table 16 based on the rated impulse voltage		N/A

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from Clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree.....:	(see appended table)	P
	Pollution degree 2 applies, unless		N/A
	- precautions taken to protect the insulation; pollution degree 1	Heating element	P
	- insulation subjected to conductive pollution; pollution degree 3		P
	The microenvironment is pollution degree 3 if the insulation can be polluted by condensation from steam produced during normal use of the appliance (IEC 60335-2-15:2002)		P
	A force of 2 N is applied to bare conductors, other than heating elements		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		N/A
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17.....:		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18.....:		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		--
	- by measurement, in accordance with 29.3.1, or		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consist of at least 2 layers		N/A
	Reinforced insulation consist of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N/A
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19.....:		N/A

IEC 60335-2-15 Attachment 1			
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 62233:2008
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CENELEC COMMON MODIFICATIONS			
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
	When the provisions of footnote b to Table Z101 apply, appliance marked with: (EN 60335-2-15, A11:10)		--
	<ul style="list-style-type: none"> the substance of "CAUTION: Hot surface", or 		N/A
	<ul style="list-style-type: none"> 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)		P
	An indication that the device has been operated is given by:		--
	<ul style="list-style-type: none"> a tactile feedback, or 		N/A
	<ul style="list-style-type: none"> an audible and visual feedback 		P
	A selector switch with an off-position clearly identifiable is allowed (EN 60335-2-15, A11:12)		N/A

IEC 60335-2-15 Attachment 1			
Clause	Requirement - Test	Result - Remark	Verdict
	An ON/OFF switch, if any, is considered a suitable device to stop operational functions (EN 60335-2-15, A11:12)		P
	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)		P
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		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
	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, A11:10)		--
	This appliance shall not be used by children. Keep the appliance and its cord out of reach of children		N/A
	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		P
	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

IEC 60335-2-15 Attachment 1			
Clause	Requirement - Test	Result - Remark	Verdict
	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		P
	Children shall not play with the appliance		P
	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		P
	The height of the characters, measured on the capital letters, is at least 3 mm		P
	These instructions are also available in an alternative format, e.g. on a website		P
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		P
	The appliance being in every possible position during the test		P
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		P
8.2	Compliance is checked by applying the test probes of EN 61032		P
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A

IEC 60335-2-15 Attachment 1			
Clause	Requirement - Test	Result - Remark	Verdict
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)		N/A
	Table Z101 added (EN60335-2-15, A11:12)		P
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 l, the temperature rise limits in Table Z101 apply (EN60335-2-15, A11:12)		P
	The appliance is supplied at rated voltage and operated under normal operation		P
	Temperatures rises are not measured on:		--
	<ul style="list-style-type: none"> • the lids 		P
	<ul style="list-style-type: none"> • surfaces within 25 mm from <ul style="list-style-type: none"> - the edge of the lid - the ventilation openings - the edge of the hot functional surface 		P
	<ul style="list-style-type: none"> • enclosure at a distance within 25 mm from the heating element 		P
	<ul style="list-style-type: none"> • underside surfaces that are not accessible with probe 41 of EN 61032 		P
11.Z102	For feeding-bottle heaters and yoghurt makers the temperature rise limits in Table Z101 apply (EN60335-2-15, 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/A
	Test probe 18 applied with a force of 2,5N on the appliance fully assembled		N/A


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Clause	Requirement - Test	Result - Remark	Verdict
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 (EN60335-2-15, A11:12)		P
24.1	Components comply with the safety requirements specified in the relevant standards as far as they reasonably apply		P
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance.		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P
	Components that have not been previously tested or do not comply with the standard for the relevant component are tested according to the requirements of 30.2		P
	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		P
	- 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		P
	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		P
	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		P
	Components that have not been separately tested and found to comply with the relevant standard, and		N/A
	components that are not marked or not used in accordance with their marking,		N/A
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		N/A

IEC 60335-2-15 Attachment 1			
Clause	Requirement - Test	Result - Remark	Verdict
	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
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 having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC/TR 60083:		--
	- for Class I appliances: standard sheet C2b, C3b or C4.....:	C4	P
	- for Class II appliances: standard sheet C5 or C6		N/A
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

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Clause	Requirement - Test	Result - Remark	Verdict
	Halogen-free thermoplastic compound sheathed supply cords have properties at least those of:		--
	<ul style="list-style-type: none"> halogen-free thermoplastic compound sheathed cords (H03Z1Z1H2-F or H03Z1Z1-F), for appliances having a mass not exceeding 3 kg 		N/A
	<ul style="list-style-type: none"> halogen-free thermoplastic compound sheathed cords (H05Z1Z1H2-F or H05Z1Z1-F), for other appliances 		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/A
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N/A
ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS		--
	Norway		--
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A
	All CENELEC countries		--
25.6 and 25.25	Information concerning National plug and socket-outlets is available from the CENELEC website. Normative national requirements concerning plug and socket-outlets are shown in the relevant National standard		P
	Ireland and United Kingdom		--
25.8	In the table, the lines for 10 A and 16 A are replaced by:		--
	> 10 and ≤ 13 1,25		N/A

IEC 60335-2-15 Attachment 1			
Clause	Requirement - Test	Result - Remark	Verdict
	> 13 and ≤ 16 1,5		N/A
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		--
	Ireland		--
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		--
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		P

Annex EN 62233:2008			
Clause	Requirement + Test	Result - Remark	Verdict
EMF- ELECTROMAGNETICS FIELDS			
	The tested product also complies with the requirements of EN 62233:2008		
	Limit100%	Measured max. : 0,200%	P

EN 60335-1: 2012 / A11: 2014 + AC:2014			
7.14	In NOTE Z1, replace "IEC 82079-1" by "EN 82079-1".		N/A
Annex ZF	In Table ZF.1 – List of standards under CLC/TC 61, replace line of EN 60335-2-38 by the following: 		N/A
8.1.1	Test probe B and probe 18 of EN 61032 are applied with a force not exceeding 1 N, the appliance being in every possible position, except that appliances normally used on the floor and having a mass exceeding 40 kg are not tilted.		P
Annex ZA	Ireland and United Kingdom		--
25.8	In the table, the lines for 10 A and 16 A are replaced by:		--
	> 10 and ≤ 13 1,25 (1,0) ^b		N/A

IEC 60335-2-15 Attachment 1			
Clause	Requirement - Test	Result - Remark	Verdict

	> 13 and ≤ 16 1,5 (1,0) ^b		N/A
--	--------------------------------------	--	-----

EN 60335-2-15/AC:2013			
7.12	Replace the 3rd and 4th paragraphs of Part 1 beginning by “The instructions shall include the substance...” and “This appliance can be used by children...” with the following:		P
8	Text delete		P
11.8	Modification: Replace the first paragraph of Part 1 by the following: “During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 3.” In Table 3 delete the row “External enclosure of motor-operated appliances , except handles held in normal use” and the corresponding footnotes. Add the following Table Z101.		P
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, the temperature rise limits in Table Z101 apply.		P

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10.1	TABLE: Power input deviation					P
Input deviation of/at:	P rated (W)	P measured (W)	dP	Required dP	Remark	
KL-912D	400	404	-1,0%	+5%, -10%	220V, 50/60 Hz	
	500	479	-4,2%	+5%, -10%	240V, 50/60 Hz	
KL-919B	850	818	-3,8%	+5%, -10%	220V, 50/60 Hz	
	950	968	+1,9%	+5%, -10%	240V, 50/60 Hz	

11.8	TABLE: Heating test, thermocouples(for model KL-919B)		P
	Test voltage (V)	1,15 x 950 = 1093 W	—
	Ambient (°C)	23,0-20,1	—
Thermocouple locations	dT (K)	Max. dT (K)	
Supply cord	38,1	50	
Ambient of timer	59,1	T125-25=100	
Ambient of thermostat	99,2	T185-25=160	
Internal wire	88,4	T200-25=175	
Fibreglass tube	99,2	T200-25=175	
Rubber tube for thermal link	116,5	T200-25=175	
Heat shrinkable tube	68,5	T125-25=100	
Timer knob	23,1	60 / Clause 30	
Handle of body	21,1	60	
Lamp cover	38,2	Clause 30	
Bottom enclosure	66,1	Clause 30	
Floor of test corner	48,2	65	
Handle of attached container	48,1	60	
Handle of upper lid	50,1	60	

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11.8(Table Z101)-1	TABLE: Temperature rise limits for surfaces (For model KL-919B)	P
	Ambient (°C):	23,0-22,9
	Test voltage (V):	240 V
	dT (K)	Max. dT (K)
Bare metal	--	45
Coated metal	--	55
Glass and ceramic	--	60
Plastic and plastic coating > 0,3 mm	25,6	65

11.8(Table Z101)-2	TABLE: Temperature rise limits for surfaces (For model KL-912D)	P
	Ambient (°C):	23,1-22,3
	Test voltage (V):	240 V
	dT (K)	Max. dT (K)
Bare metal	13,2	45
Coated metal	--	55
Glass and ceramic	--	60
Plastic and plastic coating > 0,3 mm	22,1	65

13.2	TABLE: Leakage current		P
	Heating appliances: 1.15 x rated input (W) :	For KL-912D: 1,15 x 500 = 575 W For KL-919B: 1,15 x 950 = 1093 W	—
	Motor-operated and combined appliances: 1.06 x rated voltage (V) :	--	—
	Leakage current between	I (mA)	Max. allowed I (mA)
	L, N and earthed metal	0,06	0,75
	L, N and switch knob/ enclosure/ handle / control panel	0,12 Peak	0,35 Peak

13.3	TABLE: Electric strength		P
	Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
	L, N and earthed metal	1000	No

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Internal wire and enclosure/ switch knob/ control panel	1750	No
L, N and enclosure/ switch knob/ control panel	3000	No

16.2	TABLE: Leakage current		P
	Single phase appliances: 1.06 x rated voltage (V)	240 x 1,06=254,4 V	—
	Three phase appliances 1.06 x rated voltage divided by $\sqrt{3}$ (V)	--	—
Leakage current between		I (mA)	Max. allowed I (mA)
Live parts and earthed metal		0,25	0,75
Live parts and switch knob/ enclosure/ handle / control panel		0,08	0,25

16.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Live parts and earthed metal		1250	No
Internal wire and enclosure/ switch knob/ control panel		1750	No
Live parts and enclosure/ switch knob/ control panel		3000	No

19	Abnormal operation conditions KL-919B						P
Operational characteristics		YES/NO	Operational conditions				
Are there electronic circuits to control the appliance operation?		--	--				
Are there "off" or "stand-by" position?		Yes	off				
The unintended operation of the appliance results in dangerous malfunction?		NO	--				
Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result
19.2	0,85 times rated power	Thermostat operated until steady, No hazard	N/A	N/A	N/A	N/A	P
19.3	1,24 times rated power	Thermostat operated until steady, No hazard	N/A	N/A	N/A	N/A	P

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19.4	Short circuit thermostat	Thermal link operated, no hazard	N/A	N/A	N/A	N/A	P
19.5	1,15 times rated power	Same as cl.11.8 & 19.4	N/A	N/A	N/A	N/A	P
19.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
19.101	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.102	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.103	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Supplementary information:

19.13	TABLE: Abnormal operation, temperature rises			P
Thermocouple locations		dT (K)		Max. dT (K)
	Cl.19.2	Cl.19.3	Cl.19.4	--
Test corner	11,9	12,6	33,4	150
Power supply cord insulation	32,5	35,4	58,3	150
Timer knob	3,3	4,5	--	Clause 30
Lamp cover	7,3	8,1	--	Clause 30
Body enclosure	50,2	52,1	--	Clause 30
Bottom enclosure	25,6	29,4	--	Clause 30

24.1	TABLE: Components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity	
Plug	Guangzhou Huan Qiu Electrical & Appliance Co. Ltd.	HQ-B301	AC250V, 16 A, IP20, DIN49441-R2 Colour: Black and white	DIN VDE 0620-1 AfPS GS 2014:01 PAK	VDE*	

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Alternative	MAINLAND ELECTRIC WIRE & CABLE CO., LTD.	ML-302	AC250V, 16 A, IP20, DIN49441-R2 Colour: Black and white	DIN VDE 0620-1 AfPS GS 2014:01 PAK	VDE*
	Sheng Yi Electrical Factory	SY-22	AC250V, 16 A, IP20, DIN49441-R2 Colour: Black and white	DIN VDE 0620-1 AfPS GS 2014:01 PAK	VDE*
	Zhongshan Guzhen Hongli Cable & Appliance Factory	HL-5B	AC250V, 16 A, IP20, DIN49441-R2 Colour: Black and white	DIN VDE 0620-1 AfPS GS 2014:01 PAK	VDE*
	Unirise Electric Wire & Cable Co., Ltd	UE-312	AC250V, 16 A, IP20, DIN49441-R2 Colour: Black and white	DIN VDE 0620-1 AfPS GS 2014:01 PAK	VDE*
BS plug	Friendship Enterprises international Ltd.	FE-130P	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*
Alternative	Foshan Anden Lndastry Co. Ltd.	DL-203	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*
	Joint Gain Plastic Products Factory	JG-663	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*
	Foshan Anden Industry CO., LTD.	DL113	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*
	Sheng Yi Electrical Factory	SY-88	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*
	Guangzhou Huanqiu Electrical & Appliance Co., Ltd	HQ-BS301	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*
	Zhongshan Guzhen Hongli Cable & Appliance Factory	HL-17	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*

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	Unirise Electric Wire & Cable Co., Ltd	UE-324	AC 250 V, 5A or 13 A (with approved 5A or 13 A fuse)	BS 1363	KEMA*
Supply cord	Guangzhou Huan Qiu Electrical & Appliance Co. Ltd.	H03VV-F, H05VV-F	3G 0,75 mm ² Colour: Black and white	DIN VDE 0281-5 AfPS GS 2014:01 PAK	VDE*
Alternative	MAINLAND ELECTRIC WIRE & CABLE CO., LTD.	H03VV-F, H05VV-F	3G 0,75 mm ² Colour: Black and white	DIN VDE 0281-5 AfPS GS 2014:01 PAK	VDE*
	Sheng Yi Electrical Factory	H03VV-F, H05VV-F	3G 0,75 mm ² Colour: Black and white	DIN VDE 0281-5 AfPS GS 2014:01 PAK	VDE*
	Zhongshan Guzhen Hongli Cable & Appliance Factory	H03VV-F, H05VV-F	3G 0,75 mm ² Colour: Black and white	DIN VDE 0281-5 AfPS GS 2014:01 PAK	VDE*
	Unirise Electric Wire & Cable Co., Ltd	H03VV-F, H05VV-F	3G 0,75 mm ² Colour: Black and white	DIN VDE 0281-5 AfPS GS 2014:01 PAK	VDE*
Timer for KL-912, KL-917, KL-912B, KL-912C, KL-912D	Ningbo Sijia Electric	DFJ-60-01A	AC 250V, 10A; 10000 cycles, T85, glow wire 850°C	EN60730-1 EN60730-2-1	TÜV SUD*
Timer for KL-919, KL-919B, KL-916, KL-916B	Hang Zhou West Lake Timer Switch Factory	DKJ/1-60	AC 250V, 16A; 1E4, T125 glow wire 850 °C	EN60730-1 EN60730-2-1	VDE*
Alternative	Hangzhou Fudan Time-Control Si-Tech. Co., Ltd.	DKJ-Y	AC 250 V, 16 A, 1E4, T125, glow wire 850 °C	EN 60730-1; EN 60730-2-1	VDE*
	JIANGSU SHALONG MECHANICAL & ELECTRICAL TECHNOLOGY CO LTD	SL-60C	AC 250V, 15A; 1E4, T120, glow wire 850 °C	EN 60730-1; EN 60730-2-1	TÜV*
Thermostat for KL-912, KL-917 KL-919, KL-912C	Gaoming Xi Te Electrical co. Ltd	KSD 301	AC 250V, 10A; 1E4, T185, Tf:110 glow wire 850 °C	EN60730-1 EN60730-2-9	VDE*
Alternative	Jiangmen Xinhui huatong Electrical	TA-07	AC 250V, 10A; 1E4, T230, Tf:110 glow wire 850 °C	EN60730-1 EN60730-2-9	TÜV Rheinland*

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	Guangdong Shunde Zhongbao Thermostat Technology Co., Ltd.	KSD301	AC 250V, 10A; 1E4, Tf:110 glow wire 850 °C	EN60730-1 EN60730-2-9	TÜV Rheinland*
	Gaoyao Xingping Electrical Appliance Co., Ltd.	KSD301	AC250 V,10A, T110°C, Tmax. 180°C, 1E4, Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TÜV
	Foshan Nuo Kai Electrical Appliance Co., Ltd	KSD301	AC 250 V; 10 A; Tf.110°C; T400; 30000 cycles; Glow wire 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland*
	Shaoxing Zhongxin Electric Appliance Co., Ltd.	KSD301P	AC250 V;10A; Tf.110°C; T250; 100000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland
	Foshan Tianpeng Thermostats Co., Ltd.	T1/11	AC250 V;10A; Tf.110°C; T180; 100000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland
	Foshan Deqin Electrical Co.,Ltd	KSD301	AC250 V;10A; Tf.110°C; T185; 100000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland
Thermostat For KL-916, KL-916B, KL-919B, KL-912B, KL-912D	Gaoming Xi Te Electrical co. Ltd	KSD301	AC 250V, 10A; 1E4, T185, Tf:125 glow wire 850 °C	EN60730-1 EN60730-2-9	VDE*
alternative	Jiangmen Xinhui huatong Electrical	TA-07	AC 250V, 10A; 1E4, T230, Tf:125 glow wire 850 °C	EN60730-1 EN60730-2-9	TUV Rheinland*
	Guangdong Shunde Zhongbao Thermostat Technology Co., Ltd.	KSD301	AC 250V, 10A; 1E4, Tf:125 glow wire 850 °C	EN60730-1 EN60730-2-9	TUV Rheinland*
	Gaoyao Xingping Electrical Appliance Co., Ltd.	KSD301	AC250 V,10A, T125°C, Tmax. 180°C, 1E4, Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TUV*
	Foshan Nuo Kai Electrical Appliance Co., Ltd	KSD301	AC 250 V; 10 A; Tf.125°C; T400; 30000 cycles; Glow wire 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland*

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	Shaoxing Zhongxin Electric Appliance Co., Ltd.	KSD301P	AC250 V;10A; Tf.125°C; T250; 10000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TUV* Rheinland
	Foshan Tianpeng Thermostats Co., Ltd.	T1/11	AC250 V;10A; Tf.125°C; T180; 10000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TUV* Rheinland
	Foshan Deqin Electrical Co.,Ltd	KSD301	AC250 V;10A; Tf.125°C; T185; 10000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland
Thermostat For KL-916C, KL-916D	Gaoming Xi Te Electrical co. Ltd	KSD301	AC 250V, 10A; 1E4, T185, Tf:150 glow wire 850 °C	EN60730-1 EN60730-2-9	VDE*
alternative	Jiangmen Xinhui huatong Electrical	TA-07	AC 250V, 10A; 1E4, T230, Tf:150 glow wire 850 °C	EN60730-1 EN60730-2-9	TUV Rheinland*
	Guangdong Shunde Zhongbao Thermostat Technology Co., Ltd.	KSD301	AC 250V, 10A; 1E4, Tf:150 glow wire 850 °C	EN60730-1 EN60730-2-9	TUV Rheinland*
	Gaoyao Xingping Electrical Appliance Co., Ltd.	KSD301	AC250 V,10A, T150°C, Tmax. 180°C, 1E4, Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TUV*
	Foshan Nuo Kai Electrical Appliance Co., Ltd	KSD301	AC 250 V; 10 A; Tf.150°C; T400; 30000 cycles; Glow wire 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland*
	Shaoxing Zhongxin Electric Appliance Co., Ltd.	KSD301P	AC250 V;10A; Tf.150°C; T250; 10000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TUV* Rheinland
	Foshan Tianpeng Thermostats Co., Ltd.	T1/11	AC250 V;10A; Tf.150°C; T180; 10000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TUV* Rheinland
	Foshan Deqin Electrical Co.,Ltd	KSD301	AC250 V;10A; Tf.150°C; T185; 10000cycles; Glow wire: 850°C	EN 60730-1 EN 60730-2-9	TÜV Rheinland
Thermal link for KL-912, KL-917, KL-912C	NEC SCHOTT Components Corporation	SF 169E	AC 250V, 10A, Tf:172°C	EN 60691	VDE*

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Alternative	Aupo Electronics Ltd	AF 172	AC 250V, 10A, Tf:172°C	EN 60691	VDE*
	Zhongshan sheng ping	SPF 169	AC 250V, 10A, Tf:172°C	EN 60691	VDE*
	Foshan Shunde Jinyu Electrical Co., Ltd.	JY169A	AC250 V; 10 A; Tf.172°C	EN 60691	TÜV Rheinland*
	Foshan Gaoming Xi Te Electrical Co., Ltd.	RY-01E172	AC250 V; 10 A; Tf.172°C	EN 60691	TÜV R 50129664
	Zhongshan Longde Electrical Co., Ltd.	RY172	AC250 V; 10 A; Tf.172°C	EN 60691	TÜV Rheinland*
Thermal link for KL-919, KL-919B, KL-916C, KL-916D, KL-912B, KL-912D	NEC SCHOTT Components Corporation	SF 214E	AC 250V, 10A, Tf:216°C	EN 60691	VDE*
Alternative	Aupo Electronics Ltd	AF 216	AC 250V, 10A, Tf:216°C	EN 60691	VDE*
	Zhongshan sheng ping	SPF 214	AC 250V, 10A, Tf:216°C	EN 60691	VDE*
	Foshan Shunde Jinyu Electrical Co., Ltd.	JY216A	AC250 V; 10 A; Tf.216°C	EN 60691	TÜV Rheinland*
	Foshan Gaoming Xi Te Electrical Co., Ltd.	RY-01E216	AC250 V; 10 A; Tf.216°C	EN 60691	TÜV R 50129664
	Zhongshan Longde Electrical Co., Ltd.	RY216	AC250 V; 10 A; Tf.216°C	EN 60691	TÜV Rheinland*
Thermal link For KL-916, KL-916B,	Zhongshan Sheng Ping Thermal Protectors Co., Ltd.	SPF152	AC 250 V, 10 A Tf: 157°C	EN 60691	VDE*
Alternative	NEC Schott Components Corporation	SF152E	AC 250 V, 10 A, Tf: 157°C	EN 60691	VDE*
	Aupo Electronics Ltd,	BF157.	AC 250 V, 10 A, Tf: 157°C	EN 60691	VDE*
	Foshan Shunde Jinyu Electrical Co., Ltd.	JY155A	AC250 V; 10 A; Tf: 157°C	EN 60691	TÜV Rheinland*

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	Foshan Gaoming Xi Te Electrical Co., Ltd.	RY-01E153	AC250 V; 10 A; Tf.153°C	EN 60691	TÜV R 50129664
	Zhongshan Longde Electrical Co., Ltd.	RY157	AC250 V; 10 A; Tf.157°C	EN 60691	TÜV Rheinland*
Heating element for KL-912, KL-912C, KL-917	Shunde Kilon Electrical	KL-912	230V, 450W	EN60335-1 EN60335-2-15	Tested with appliance
Heating element for KL-912B, KL-912D	Shunde Kilon Electrical	KL-912B	230V, 450W	EN60335-1 EN60335-2-15	Tested with appliance
Heating element for KL-919	Shunde Kilon Electrical	KL-919	230V, 900W	EN60335-1 EN60335-2-15	Tested with appliance
Heating element for KL-919B	Shunde Kilon Electrical	KL-919B	230V, 900W	EN60335-1 EN60335-2-15	Tested with appliance
Heating Element For KL-916, KL-916B	Kilon Electronics Ltd.	916	230V, 850 W	EN 60335-1, EN 60335-2-15	Tested with appliance
Heating Element For KL-916C, KL-916D	Kilon Electronics Ltd.	KL-916C	230V, 850 W	EN 60335-1, EN 60335-2-15	Tested with appliance
Internal wire/	Guangzhou Jin-ying Special Wire Factory	3122;	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E192725)
Alternative	JIANGYIN YUANDA ELECTRICAL MATERIAL CO LTD	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E216252)
	Shenzhen Qifurui Electronics Co., Ltd.	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E211048)
	3F ELECTRONICS INDUSTRY CORP	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E305786)
	SHENZHEN MYSUN INSULATION MATERIALS CO LTD	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E239689)
	XIANGSHAN FAHUA ELECTRIC WIRE & CABLE CO LTD	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E222362)

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	FUSHAN SHUNDE SPECIAL TYPA WIRE ROD ELECTRONICS CO LTD	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E346532)
	YANG TAI WIRE & CABLE CO LTD.	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E214859)
	NIZING ELECTRIC CO LTD	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Tested with appliance (E215834)
	FOSHAN CITY SHUNDE ZHENGLANG METALWARE ELECTRIC APPARATUS CO LTD	3122	300 V,200°C, 20AWG	EN60335-1 EN60335-2-15	Test with appliance (E313243)
	FOSHAN SHUNDE PANTAI SPECIAL WIRE ROD ELECTRONICS CO LTD	3122	300 V,200°C, 20AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E346532)
Internal Wire for indicator lamp	Shenzhen Qifurui Electronics Co., Ltd.	H05S-K	0,5 mm ² , 180°C	EN60335-1 EN60335-2-15	Tested with appliance
Alternative	Wuxi Huacheng Cable Co., Ltd.	H05S-K	0,5 mm ² , 180°C	EN60335-1 EN60335-2-15	Tested with appliance
	Zhuanglong Fluoroplastics Product Factory	H05S-K	0,5 mm ² , 180°C	EN60335-1 EN60335-2-15	Tested with appliance
	Fushan Shunde Special Typa Wire Rod Electronics Co., Ltd.	H05S-K	0,5 mm ² , 180°C	EN60335-1 EN60335-2-15	Tested with appliance
	Guangzhou Jin-ying Special Wire Factory	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E192725)
	JIANGYIN YUANDA ELECTRICAL MATERIAL CO LTD	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E216252)
	Shenzhen Qifurui Electronics Co., Ltd.	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E211048)

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	3F ELECTRONICS INDUSTRY CORP	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E305786)
	SHENZHEN MYSUN INSULATION MATERIALS CO LTD	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E239689)
	XIANGSHAN FAHUA ELECTRIC WIRE & CABLE CO LTD	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E222362)
	FUSHAN SHUNDE SPECIAL TYPA WIRE ROD ELECTRONICS CO LTD	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E346532)
	YANG TAI WIRE & CABLE CO LTD.	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E214859)
	NIZING ELECTRIC CO LTD	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Tested with appliance (E215834)
	FOSHAN CITY SHUNDE ZHENGLANG METALWARE ELECTRIC APPARATUS CO LTD	3122;	300 V,200°C, 22AWG	EN60335-1 EN60335-2-15	Test with appliance (E313243)
	FOSHAN SHUNDE PANTAI SPECIAL WIRE ROD ELECTRONICS CO LTD	3122	300 V,200°C, 22AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E346532)
Heat shrinkable tube	CHANGYUAN ELECTRONICS (SHENZHEN) CO., LTD.	CB-HFT	125°C, 600 V	EN60335-1 EN60335-2-15	Tested with appliance (E180908)
Alternative	QIFURUI ELECTRONICS CO	QFR-h	125°C; 600 V	EN60335-1 EN60335-2-15	Tested with appliance (E225897)
	SHENZHEN WOLIDA TRADING CO LTD	RSFR-H	125°C; 600 V	EN60335-1 EN60335-2-15	Tested with appliance (E329530)

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	SHENZHEN WOER HEAT- SHRINKABLE MATERIAL CO LTD	RSFR-H	125°C; 600 V	EN60335-1 EN60335-2-15	Tested with appliance (E203950)
	DONGGUAN SALIPT CO LTD	SALIPT S-901-600	125°C; 600 V	EN60335-1 EN60335-2-15	Tested with appliance (E209436)
Fiberglass sleeve	Qiaocheng insulation material co.,ltd	Φ3, Φ8	300 V, 200°C	EN60335-1 EN60335-2-15	Tested with appliance (E238534)
Alternative	Shenzhen Wahchangwei Industrial Co., Ltd	SRS-70*, Grade: A	300 V, 200°C	EN60335-1 EN60335-2-15	Tested with appliance (E233803)
Current fuse For KL-916C, KL-916D	Dongguan Dawei Metal Electron Co., Ltd.	3T - Serie(s)	3,15A, AC 250V	EN60335-1 EN60335-2-15	Tested with appliance
Alternative	Shenzhen Lanson Electronics Co. Ltd.	3K T3.15A250V	3,15A, AC 250V	EN60335-1 EN60335-2-15	Tested with appliance
	Walter Electronic Co., Ltd.	--	3,15A, 250VAC	EN 60335-1 EN 60335-2-15	Tested with appliance
	Shenzhen Deer Electronics Co., Ltd.	32F	3,15A, 250VAC	EN 60335-1 EN 60335-2-15	VDE* and Tested with appliance
	XC Electronics (Shen Zhen) Corp. Ltd.	3F-Serie(s)	3,15A, 250VAC	EN 60335-1 EN 60335-2-15	VDE* and Tested with appliance
X capacitor For KL-916C, KL-916D	FOSHAN SHUNDE FONGMING ELECTRONIC Tech.CO.LTD	MKP-X2	AC275V; X2; 0,47µF; T105	IEC 60384-14	VDE*
Alternative	DA HUA ELECTRONIC.C O.LTD	MKP	AC275V; X2; 0,47µF; T105	IEC 60384-14	VDE*
	Foshan Shunde Chuang Ge Electronic Industrial Co., Ltd.	MKP	AC275V; X2; 0,47µF; T105	EN 60384-14	VDE*
	Dain Electronics Co., Ltd.	MPX	AC275 V, X2; 0,47µF; T110	EN 60384-14	VDE*

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	Carli Electronic Co., Ltd.	MPX	AC 275 V, X2, 0,47µF, T100	EN 60384-14	VDE*
	Dongguan City Jurcc Electronic Co., Ltd.	MPX/MKP	AC275 V; X2; 0,47µF; T110	EN 60384-14	VDE*
	Hsuan Tai Electronic Co. Ltd.	MCY	AC275 V; X2; 0,47 µF; T85	EN 60384-14	VDE*
	Shenzhen Su Rong Capacitors Co., Ltd.	MPX/MKP	AC280V,0,47µF, T100, X2	EN 60384-14	VDE*
	Tenta Electric Industrial Co. Ltd.	MEX	AC 275 V, X2, 0,47µF, T100	EN 60384-14	VDE*
Relay for KL-916C, KL-916D	Yueqing Meishuo Electric Co., Ltd.	MPA-S-112-A	10 A, 250 VAC T105, 2E4 cycles	EN 61810-1 EN 60730-1	TUV*
	ANHUI MINGGUANG LIFE ELECTRONIC CO., LTD.	BRD-SS-112L	12 A, 250 VAC T85, 6E4 cycles	EN 61810-1 EN 60730-1	TUV*
	JIAJIE ELECTRONIC CO.,LTD	JQX-14FF3-12VDC-1A	AC 250 V; 10 A; DC 12 V; 10E4; T70, Glow-wire category: 850°C	EN 61810-1 EN 60730-1	TUV Rheinland* 50195723
	SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO.,LTD	GH-1A-12L	10A, 250VAC, DC 12 V;T100, 5E5, Glow-wire category: 850°C	EN 61810-1 EN 60730-1	TUV Rheinland* 50158866
	Dongguan Sanyou Electrical Appliances Co., Ltd.	SRD-S-112DM	Contact: 250VAC, 10A, Coil: 12VDC, T85°C, 1E5 cycles, Glow wire: 850°C	EN 61810-1 EN 60730-1	TÜV Rheinland
	Xiamen Hongfa Electroacoustic Co., Ltd.	JQC-3FF	Contact: 250VAC, 10A, Coil: 12VDC, T85°C, 1E5 cycles, Glow wire: 850°C	EN 61810-1 EN 60730-1	TÜV Rheinland
	Shenzhen Yuanze Electric Co., Ltd.	Y3F-SS-112DM	Contact: 250VAC, 10A, Coil: 12VDC, T85°C, 1E5 cycles, Glow wire: 850°C	EN 61810-1 EN 60730-1	TÜV Rheinland

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	JIU JIANG SHOI ELECTRIC CO., LTD.	S3-12	Contact: 250VAC, 12A, Coil: 12VDC, T85°C, 50000 cycles, Glow wire: 850°C	EN 61810-1 EN 60730-1	TÜV Rheinland
Internal wire for PCB board of KL-916C, KL-916D	GUANG DONG XIN LONG ENTERPRISE CO	2468	300 V; 80 °C; 24 or 26AWG	EN60335-1 EN60335-2-15	Tested with appliance (E207567)
alternative	ZHONGSHAN DONGFENG ZHOUSHISHENLONG ELECTRONIC WIRE CO LTD	2468	300 V; 80 °C; 24 or 26AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E257280)
	QIFURUI ELECTRONICS CO	2468	300 V; 80 °C; 24 or 26AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E211048)
	FOSHAN SHUNDE YONGGAOLIAN WIRE & CABLE CO LTD	2468	300 V; 80 °C; 24 or 26AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E314925)
	HESHAN CITY TEHSING HUANCHIU ELECTRIC CABLE CO LTD	2468	300 V; 80 °C; 24 or 26AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E229340)
	DONGGUAN ZHIHE ELECTRICAL CABLE TECH CO LTD	2468	300 V; 80 °C; 24 or 26AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E258239)
	ZHONGSHAN DONGFENG KESHIRUIHUA WIRE & CABLE FACTORY	2468	300 V; 80 °C; 24 or 26AWG	EN 60335-1 EN 60335-2-15	Tested with appliance (E307703)
connector on PCB board for KL-916C, KL-916D	ZHEJIANG KUAILI ELECTRONICS CO LTD	--	PA	EN60335-1 EN60335-2-15	Tested with appliance (E307817)
alternative	FAMFULL ELETRONICS CO LTD	--	PA	EN60335-1 EN60335-2-15	Tested with appliance (E241222)

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Container support/ Body/ Bottom cover/	Shunde Kilon Electrical	PP	Min. thickness: 2,0 mm	EN 60335-1, EN 60335-2-15 AfPS GS 2014:01 PAK	Tested with appliance
Accessories material for KL- 916B, KL-916D	Shunde Kilon Electrical	PC,PP	Min. thickness: 2,0 mm	EN 60335-1, EN 60335-2-15 AfPS GS 2014:01 PAK	Tested with appliance
Accessories material for other models	Shunde Kilon Electrical	PP,PC	Min. thickness: 2,0 mm	EN 60335-1, EN 60335-2-15 AfPS GS 2014:01 PAK	Tested with appliance
Lamp cover	Shunde Kilon Electrical	PC	Min. thickness: 1,2 mm	EN 60335-1, EN 60335-2-15 AfPS GS 2014:01 PAK	Tested with appliance
Timer knob/ Switch button/ Timer holder	Shunde Kilon Electrical	ABS,PP	Min. thickness: 1,5 mm	EN 60335-1, EN 60335-2-15 AfPS GS 2014:01 PAK	Tested with appliance
Heater support plastic	Shunde Kilon Electrical	Bakelite, PET	Min. thickness: 1,2 mm	EN 60335-1, EN 60335-2-15	Tested with appliance

¹⁾ An asterisk indicates a mark which assures the agreed level of surveillance

28.1	TABLE: Threaded part torque test					P
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)		Applied torque (Nm)		
Screw of earthing	3,85	II		1,2		
29.1	TABLE: Clearances					P
	Overvoltage category	II			—	
		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark
330	0,2* / 0,5 / 0,8**	--	--	--	--	--
500	0,2* / 0,5 / 0,8**	--	--	--	--	--
800	0,2* / 0,5 / 0,8**	--	--	--	--	--
1 500	0,5 / 0,8** / 1,0***	--	--	--	--	--
2 500	1,5 / 2,0***	4,5	7,0	--	4,0	P
4 000	3,0 / 3,5***	--	--	10,0	--	P
6 000	5,5 / 6,0***	--	--	--	--	--
8 000	8,0 / 8,5***	--	--	--	--	--

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10 000	11,0 / 11,5***	--	--	--	--	--
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Supplementary information:

*) For tracks on printed circuit boards if pollution degree 1 and 2

***) For pollution degree 3

****) If the construction is affected by wear, distortion, movement of the parts or during assembly

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation											P
Working voltage (V)	Creepage distance (mm) Pollution degree							Type of insulation			Verdict	
	1	2			3			B**)	S**)	R**)		
	Material group				Material group							
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*)	B**)	S**)	R**)	Verdict	
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9		—	—	N/A	
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—		—	N/A	
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—		N/A	
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		—	—	N/A	
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N/A	
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N/A	
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	4,7	—	—	P	
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	—	7,5		P	
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0	—	—	10,6	P	
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A	
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A	
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A	
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A	
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A	
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A	
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A	
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A	
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A	
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A	

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>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

IEC 60335-2-15

Supplementary information:

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

**) B=Basic, S=Supplementary and R=Reinforced

Basic insulation: Live parts on heating element terminal to earthing metal part;

Supplementary insulation :Internal wire surface to accessible enclosure surface;

Reinforced in: Live parts on pilot lamp to accessible enclosure/ lamp cover surface.

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	Creepage distance (mm) Pollution degree							Verdict / Remark
	1	2			3			
	Material group			Material group				
	I	II	IIIa/IIIb	I	II	IIIa/IIIb		
≤50	0,2	0,6	0,8	1,1	1,4	1,6	1,8	N/A
>50 and ≤125	0,3	0,7	1,0	1,4	1,8	2,0	2,2	N/A
>125 and ≤250	0,4	1,0	1,4	2,0	2,5	2,8	3,2 (4,0)	P (between L&N of supply cord)
>250 and ≤400	0,8	1,6	2,2	3,2	4,0	4,5	5,0	N/A
>400 and ≤500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A

Photo document

Overall view of model KL-912B

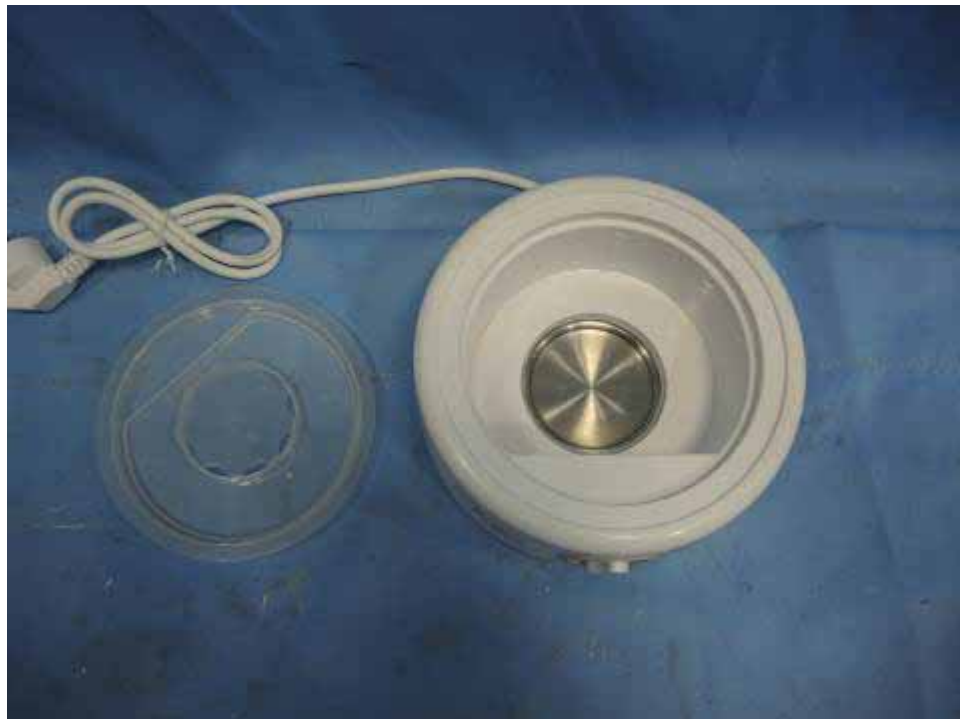
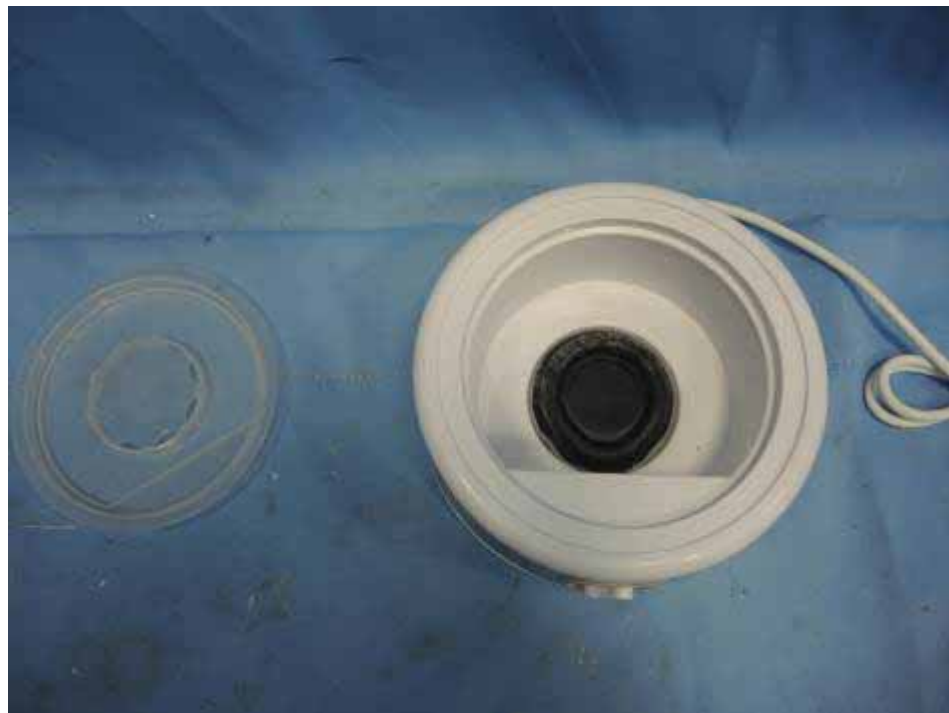


Photo document

Overall view of model KL-912C



Overall view of model KL-912D

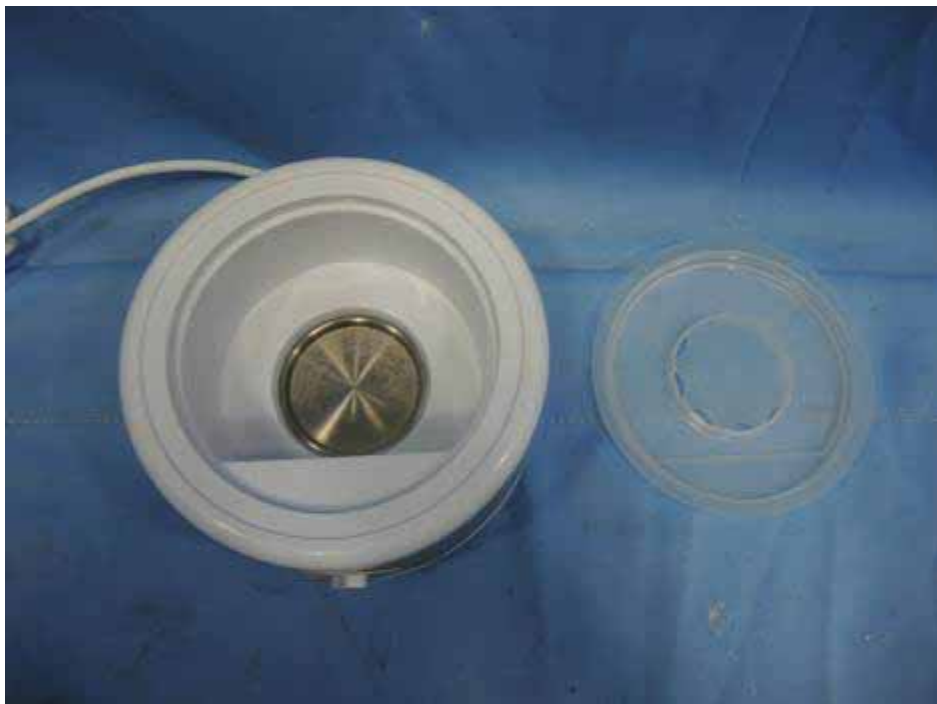
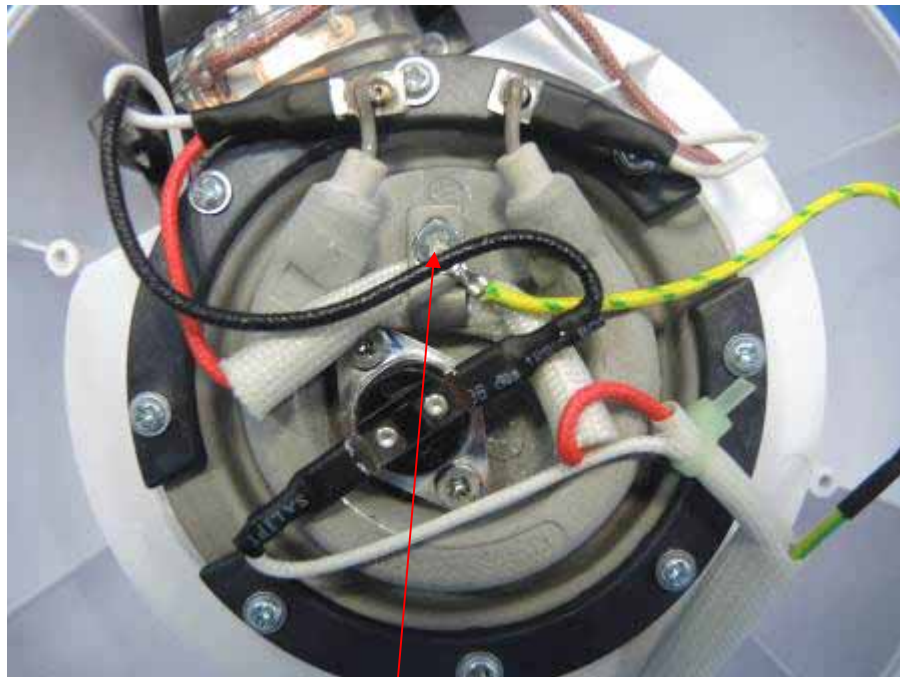
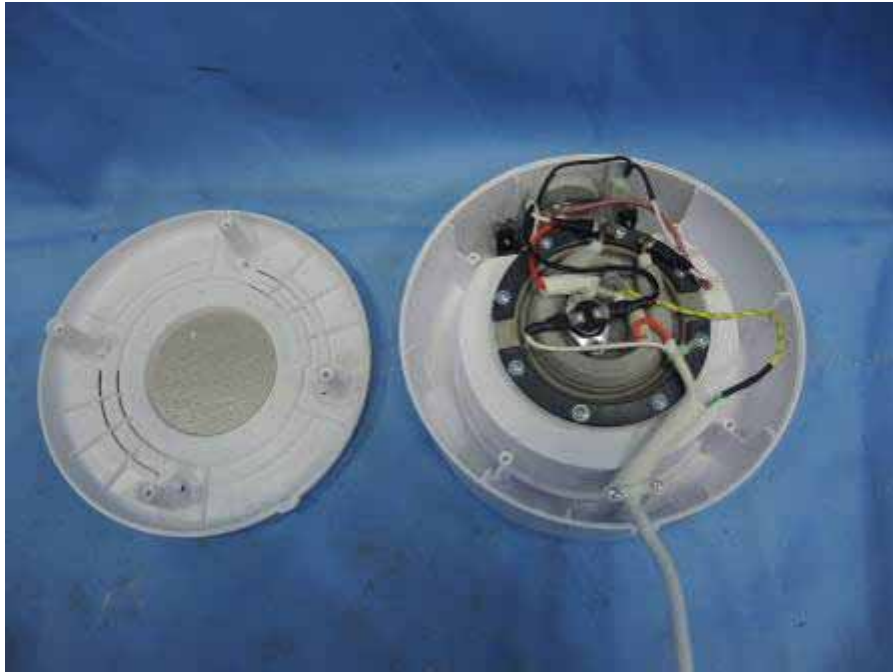


Photo document

View of heating element of KL-912B and KL-912D



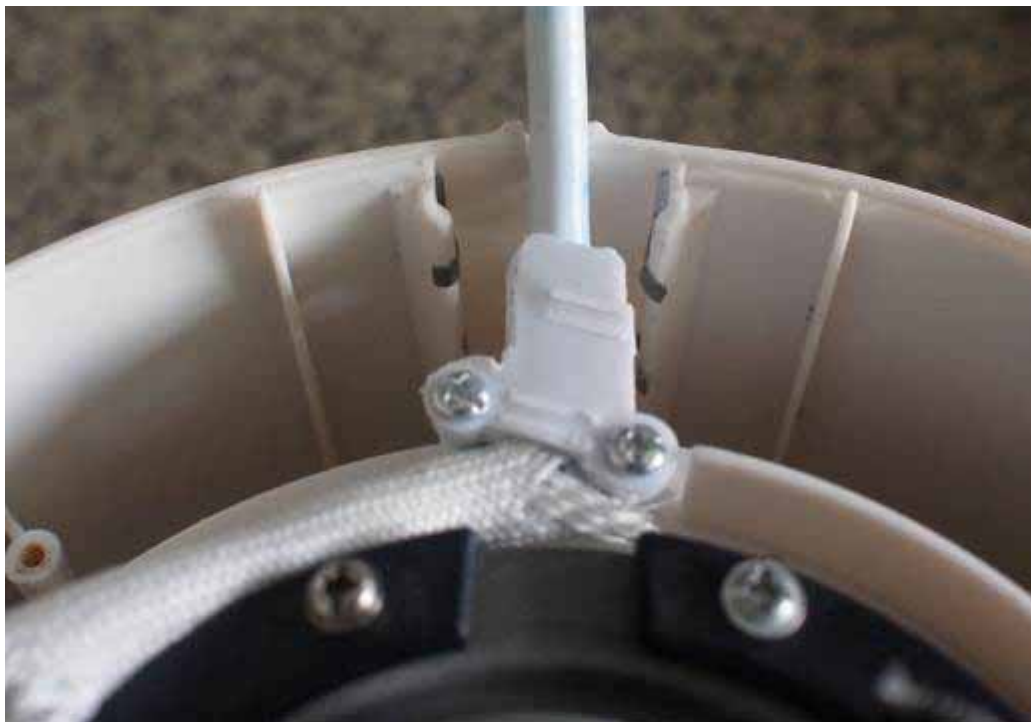
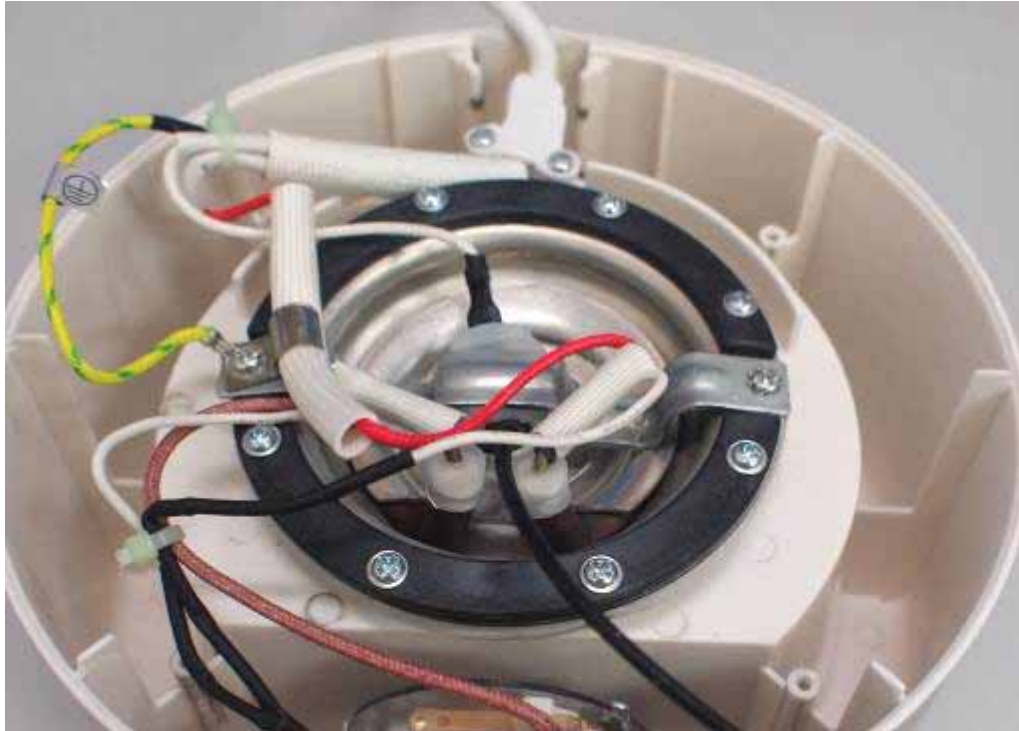
Cord bushing for KL-912D which was same as KL-912B



Earthing

Photo document

Internal Cord bushing view KL-912C.



Not possible to push the cord into the appliance to such an extent that the cord or internal parts of the appliance could be damaged.

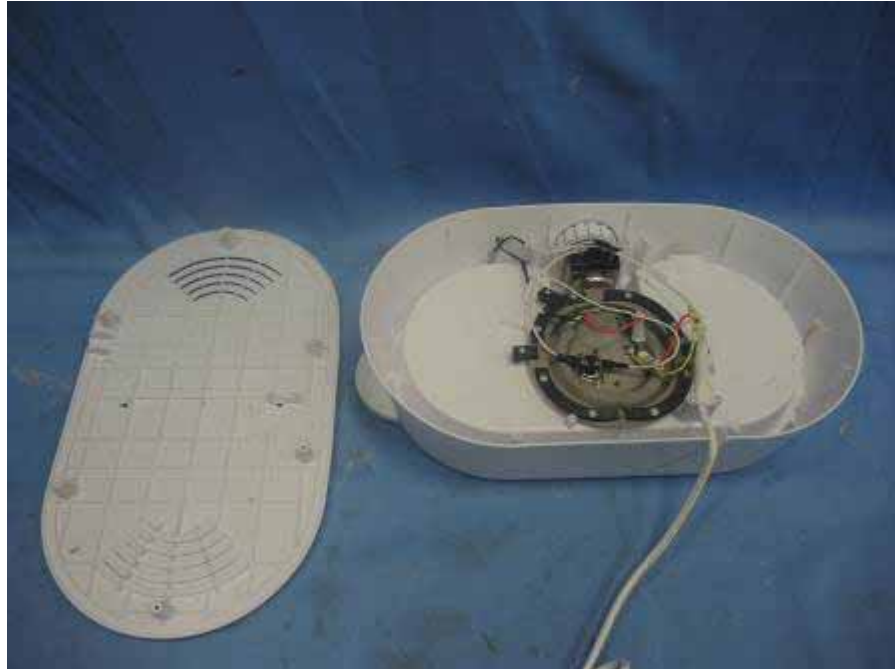
Photo document

Overall view of model KL-919B

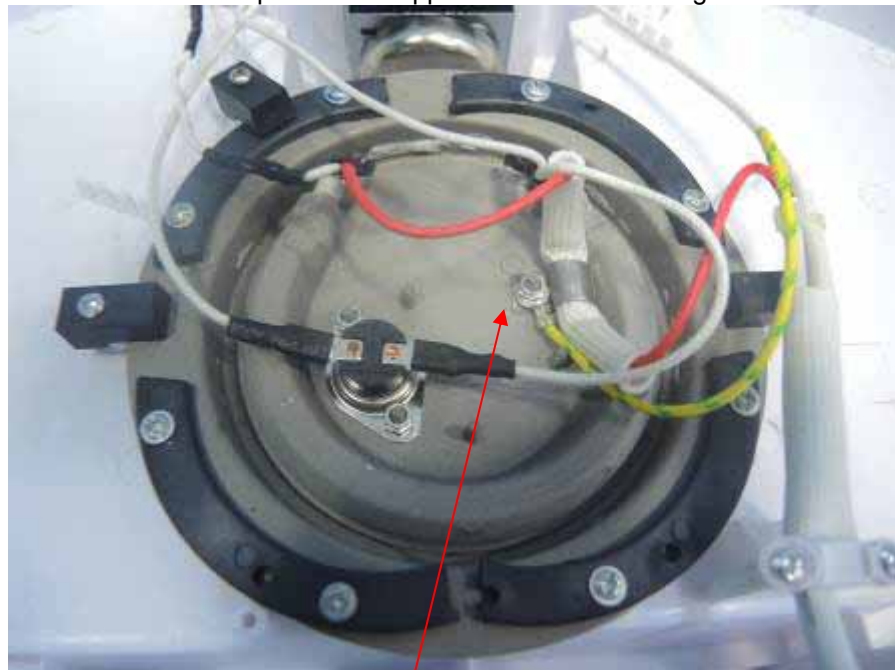


Photo document

View of heating element of KL-919B

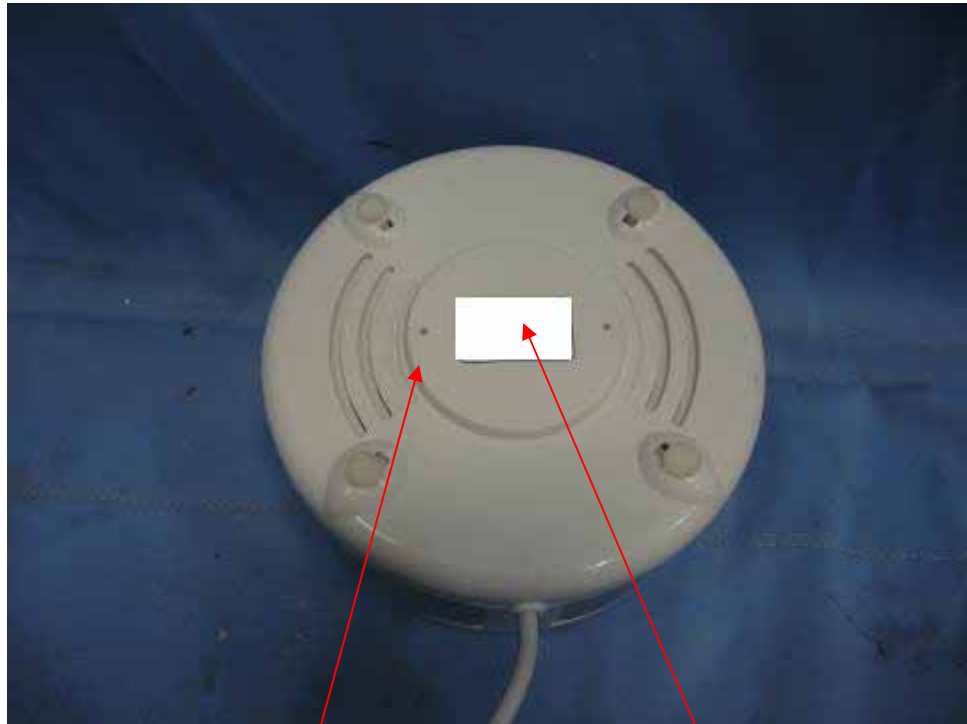


Not possible to push the cord into the appliance to such an extent that the cord or internal parts of the appliance could be damaged.



Earthing symbol

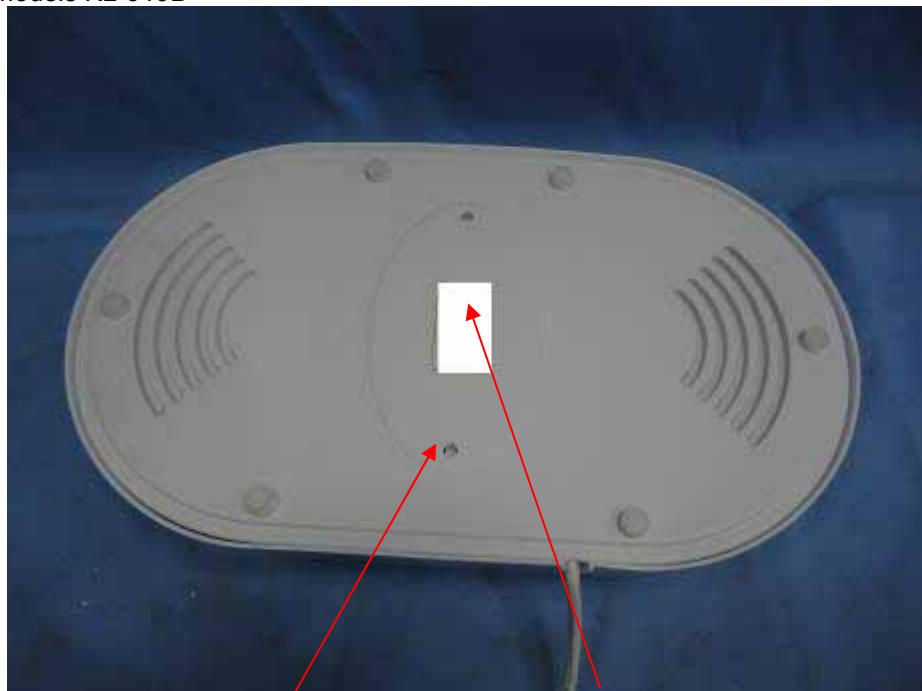
Base view for models KL-912B, KL-912C, KL-912D



5,5 mm in diameter

Marking label position

Base view for models KL-919B



5,5 mm in diameter

Marking label position

(End of report)