Test Report issued under the responsibility of:

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TEST REPORT
IEC 60335-2-15
Safety of household and similar electrical appliances
Part 2: Particular requirements for appliances for heating liquids

Report Number. .....:	160501336SHA-001
Date of issue .....:	2016-05-23; Amendment 3: 2019-04-16
Total number of pages.....	59 pages test report (include 10 pages photos)
Applicant's name.....:	Ningbo Poogoo Electrical Appliance Co., Ltd.
Address .....:	Puyan Village Ditang Street Yuyao Zhejiang China
Test specification:	
Standard .....:	IEC 60335-2-15:2002 (Fifth edition) + A1:2005 + A2:2008 in conjunction with IEC 60335-1:2010 (Fifth Edition) EN 60335-2-15: 2016+A11:2018 used in conjunction with EN 60335-1:2012+A11:2014+A13:2017 and EN 62233:2008
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

Test item description .....:	Water Kettle
Trade Mark .....:	-
Manufacturer .....:	Same as applicant
Model/Type reference .....:	PK-1001, PK-1008, PK-1008C, PK-1009, PK-1009C, PK-3008, PK-3010, PK-S1401, PK-S1401E, PK-S1408, PK-S1406
Ratings .....:	220-240V~, 50/60Hz, Class I PK-1001: 750-900W; PK-1008, PK-1008C, PK-1009, PK-1009C, PK-3008, PK-3010, PK-S1406: 1850-2200W; PK-S1401, PK-S1401E: 1680-2000W; PK-S1408: 1350-1600W

Testing procedure and testing location:		
☒	Testing Laboratory:	Intertek Testing Services Shanghai
Testing location/ address..... :		Building No.86, 1198 Qinzhou Road (North), Shanghai, 200233, China
☐	Associated CB Laboratory:	N/A
Testing location/ address..... :		
Tested by (name + signature) ..... :		Mark Zhang
Approved by (name + signature) .. :		Gavin Fu
☐	Testing procedure: TMP	N/A
Testing location/ address..... :		
Tested by (name + signature) ..... :		N/A
Approved by (name + signature) .. :		N/A
☐	Testing procedure: WMT	N/A
Testing location/ address..... :		
Tested by (name + signature) ..... :		N/A
Witnessed by (name + signature). :		N/A
Approved by (name + signature) .. :		N/A
☐	Testing procedure: SMT	N/A
Testing location/ address..... :		
Tested by (name + signature) ..... :		N/A
Approved by (name + signature) .. :		N/A
Supervised by (name + signature) :		N/A
☐	Testing procedure: RMT	N/A
Testing location/ address..... :		
Tested by (name + signature) ..... :		N/A
Approved by (name + signature) .. :		N/A
Supervised by (name + signature) :		N/A

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

Constructional data form(CDF): 7 pages

Summary of testing:

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

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

The (EU) 2015/1143 has been considered, the appliance is not intended to heat milk, coffee, or similar and there is no overflow risk during normal operation.

Tests performed (name of test and test clause):	**Testing location:**
Refer to description for Amendment 3 (page5) for details.	Building No.86, 1198 Qinzhou Road (North), Shanghai, 200233, China

Summary of compliance with National Differences

List of countries addressed: Germany

☒ **The product fulfils the requirements of** EN 60335-2-15: 2016+A11:2018 used in conjunction with EN 60335-1:2012+A11:2014+A13:2017 and EN 62233:2008

Copy of marking plate: (representative)

Marking of kettle body and its stand:

PK-S1401

220-240V~ 50/60Hz 1680-2000W

Ningbo Poogoo Electrical Appliance Co., Ltd
Puyan Village Ditang Street Yuyao Zhejiang China

Remark: When the equipment is vended to EU, then name and address of the importer or authorized representative within the EEA shall be added on the equipment.

Test item particulars ..... :	
Classification of installation and use ..... :	Class I, household and similar application
Supply Connection..... :	Cord connection, type Y attachment
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.....:	2019-04-09
Date (s) of performance of tests.....:	2019-04-09 to 2019-04-16

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

This test report should be read in conjunction with the Construction Data Form (CDF).
Appendix: Constructional Data Form (CDF)

AfPS GS 2014:01 PAK is considered and passed, please refer to PAH test report 160501336SHA-001, 160501336SHA-001-PAH+A1, 160501336SHA-001-PAH+A2 for detail.

No obvious or conspicuous PAK/PAH issues was observed.

Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies).....:	Ningbo Poogoo Electrical Appliance Co., Ltd Puyan Village Ditang Street Yuyao Zhejiang China

General product information:
The appliance covered in this report is water kettle for household and similar application.
All models incorporate temperature limiter and temperature controller to safeguard the appliances to safeguard itself.
All models characteristic refer to the following description:
1. PK-1008C, PK-1009C, PK-1001 has no base and others have.
2. As capacity:
PK-S1401, PK-S1401E, which capacity are 1, 0 litre.
PK-S1408, which capacity is Max.1, 0 litre and Min.0, 5 litre
-1001, PK-1008, PK-1008C, PK-1009, PK-1009C, PK-3008, PK-3010, PK-S1406, which capacity are 1, 7 litre.
3. PK-S1401 is same as PK-S1401E. Except for PK-S1401E has a mechanical thermometer.
4. PK-1001, PK-1008, PK-1008C, PK-1009, PK-1009C, PK-3008, PK-3010 are different at the appearance and heating element.
5. PK-S1406 is same as PK-S1408 except the different apperance.
All models incorporate alternative thermal controls and connectors, detail are listed as below:

Model	Temperature controller	Connector	Temperature limiter
PK-1008, PK-1009	R9296 (Strix Limited)	P6905 (Strix Limited)	--
	SDK-10A-1 (Fada)	SDK-10A-2 (Fada)	--
PK-1001, PK-1008C, PK-1009C	T7261 (Strix Limited)	--	--
	SDK-10A-1 (Fada)	--	--
PK-3008, PK-3010	U1521 (Strix Limited)	P72C (Strix Limited)	R4803 (Strix Limited)
	KSD-269-C (Fada)	KSD-269-2 (Fada)	SL-888 (Fada)
	YG-195(Apple)	YG-181(Apple)	SLD-113(Apple)
PK-S1401, PK-S1401E, PK-S1408, PK-S1406	U1621 (Strix Limited)	P72C9 (Strix Limited)	--
	U1611 (Strix Limited)	P72C9 (Strix Limited)	--
	KSD-269-1 (Fada)	KSD-269-2(Fada)	--
	U9201(Strix Limited)	C9201(Strix Limited)	--
	TM-XH-D(Tianming)	TM-XA-2B(Tianming)	--
	KSD-889(Fada)	SL-168-3(Fada)	--

Amendment 3:
The original test report ref. 160501336SHA-001 issued on 2016-05-23, with amendment 1 dated on 2016-11-01, with amendment 2 dated on 2018-07-05, was modified on 2019-04-16 to include the following changes and additions:

1.Added one new model: PK-S1406, PK-S1406 is same as PK-S1408 except the different appearance.

2. Updated the standard

from “EN 60335-1:2012+AC: 2014+A11:2014“to “EN 60335-1: 2012+ A11:2014+A13:2017”;

from “EN 60335-2-15:2002+A1:2005+A2:2008+A11:2012+AC:2013“ to “EN 60335-2-15:2016+A11:2018”.

3. Added alternative Temperature controller for PK-S1401, PK-S1401E, PK-S1408, PK-S1406; cordless

connector system for PK-S1401, PK-S1401E, PK-S1408, PK-S1406
4.Updated all component certificates and component Standards
Tests were performed on PK-S1406, finally only the most unfavourable results were recorded.
Clauses Concerned: Cl.7, Cl.8, Cl.10, Cl.11, Cl.13, Cl.15, Cl.16, Cl.19, Cl. 20, Cl.21, Cl.22, Cl.23, Cl.24, Cl.25, Cl.27, Cl. 29 Annex EMF and 19 photos need to be concerned. Other clause which not mentioned in the report was referred to original test report.
The temperature of Cl.30 was not higher than the original report, so Cl. 30.1 was not concerned.

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V)..... .....:	220-240	P
	Symbol for nature of supply, or..... .....:	~	P
	Rated frequency (Hz) ....:	50/60	P
	Rated power input (W), or ....:	Refer to marking	P
	Rated current (A) ....:		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark..... .....:	Refer to marking	P
	Model or type reference..... .....:	Refer to marking	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0..... .....:		N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only		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)		P
	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)		P
	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)		P
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen	220-240V	P
	Different rated values marked with the values separated by an oblique stroke	50/60Hz	P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		P
	the power input is related to the arithmetic mean value of the rated voltage range		N/A
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		P
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		P
	Symbol for class II appliances placed unlikely to be confused with other marking		N/A
	Units of physical quantities and their symbols according to international standardized system		P
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking not placed on removable parts		P
7.9	Marking or placing of switches which may cause a hazard		P
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means ....:	Use figures “0” and “1”	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
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	The instructions state that:		

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- 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 of EN60335-2-15/A11:2012	N/A
	- children being supervised not to play with the appliance	Replaced by of EN60335-2-15/A11:2012	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
	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		P
	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)		
	- 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)		P
	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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	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
	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:		
	- 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
7.12.5	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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
7.13	Instructions and other texts in an official language	English &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		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
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)		P
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
10	POWER INPUT AND CURRENT		
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1..:	(see appended table)	P
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		P
	the rated power input is related to the arithmetic mean value		N/A
11	HEATING		
11.1	No excessive temperatures in normal use		P
11.2	The appliance is held, placed or fixed in position as described.....:	Tested away from the walls of the test corner	P
	Portable appliances are tested away from the walls of the test corner (IEC 60335-2-15:2002)		P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		N/A
	the windings are non-uniform or it is difficult to make the necessary connections		N/A
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) .....:	(see appended table)	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
11.7	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)		P
	For kettles with thermostat : test terminated 15 min after the water has attained 95 ℃ and 5 min after for others kettles		N/A
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 :	(see appended table)	P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	When an appliance connector incorporates a thermostat, the temperature rise limit for the pins of the inlet does not apply (IEC 60335-2-15:2002)		N/A
	The temperature rise limits of motors, transformers, components of electronic circuit and parts directly influenced by them may be exceeded when the appliance is operated at 1,15 times rated power input (IEC 60335-2-15:2002)		N/A
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of Annex C are carried out		N/A
	Sealing compound does not flow out		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):	Same as Cl.11.4	P
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V):		N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	For other appliances, a low impedance ammeter may be used		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
15	MOISTURE RESISTANCE		
15.2	Spillage of liquid does not affect the electrical insulation		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	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)		P
	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)		P
	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):	0,255l	P
	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)		P
	Steam sterilizers : particular overfilling test in conditions as specified (IEC 60335-2-15/A1:2005)		N/A
	Espresso coffee makers provided with a removable coffee pot: particular overfilling test in conditions as specified (IEC 60335-2-15/A2:2008)		N/A
15.3	Appliances proof against humid conditions		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		N/A
	Humidity test for 48 h in a humidity cabinet	93%RH, 23℃	P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	Reassembly of those parts that may have been removed		N/A
	The appliance withstands the tests of clause 16		P
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)		P
	Compliance is checked by the test in conditions as specified (IEC 60335-2-15/A1:2005)		P
	Stand withstanding the test of 16.3 with voltage reduced to 2500 V for reinforced insulation (IEC 60335-2-15:2002)		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V):		P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by √3 (V):		N/A
	Leakage current measurements:	(see appended table)	P
	Limit values doubled if:		
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified .....:	(see appended table)	N/A
16.3	Electric strength tests according to table 7.....:	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified .....:	(see appended table)	P
	No breakdown during the tests		P
19	ABNORMAL OPERATION		

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe .....:	(see appended table)	P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		P
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		P
	if applicable, to the test of 19.5		P
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		N/A
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		N/A
	until steady conditions are established		P
	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)		P
	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)		P
	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)		P
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W) .....:		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Kettles are operated empty at 1.15 times rated power input (IEC 60335-2-15:2002)	Same as cl.11.4	P
	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)	Depth of 10 mm	P
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		P
	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		P
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		P
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless		P
	they comply with the conditions specified in 19.11.1		N/A
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		N/A
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N/A
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		N/A
	During and after each test the following is checked:		
	- the temperature of the windings do not exceed the values specified in table 8		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	- the appliance complies with the conditions specified in 19.13		N/A
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		
	- the base material of the printed circuit board withstands the test of Annex E		N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N/A
	b) open circuit at the terminals of any component	Open LED diode: No hazards.	P
	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	Short circuit LED diode: No hazards.	P
	This fault condition is not applied between the two circuits of an optocoupler		N/A
	e) failure of triacs in the diode mode		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
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

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Clause	Requirement - Test	Result - Remark	Verdict
	If the appliance can still be operated it complies with 20.2		N/A
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		
	- basic insulation (V):	1000V/1min	P
	- supplementary insulation (V):	1750V/1min	P
	- reinforced insulation (V):	3000V/1min	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		N/A
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	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)	1,15 times is more unfavourable	P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	During the test, any flames keep within the enclosure of the kettle and supporting surface does not ignite (IEC 60335-2-15:2002)	No flames	P
	After the test, live parts not be accessible (IEC 60335-2-15:2002)		P
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)	1,15 times rated power input	P
	Within 2 s of the thermal cut-out operating, the kettle is filled with water having a temperature of 15 ℃ ± 5 ℃. After 1 min, the kettle is emptied (IEC 60335-2-15:2002)		P
	The test is carried out 100 times (IEC 60335-2-15:2002)		P
20	STABILITY AND MECHANICAL HAZARDS		
20.1	Appliances having adequate stability		P
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		P
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
21	MECHANICAL STRENGTH		
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J		P
	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

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Clause	Requirement - Test	Result - Remark	Verdict
	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		
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		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		P
	In case of doubt, test as described		P
22.6	Drain holes shall be at least 5 mm in diameter or 20 mm² in area with a width of at least 3 mm (IEC 60335-2-15:2002)	5,2mm in diameter	P
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		N/A
	Tests as described	50N pull and push to enclosure and handle, 50N push and 30N pull to button	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	Knobs	P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	Handle	P

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Clause	Requirement - Test	Result - Remark	Verdict
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		P
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		P
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless	No such material	P
	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	P
22.23	Oils containing polychlorinated biphenyl (PCB) not used	No oils	P
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P

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Clause	Requirement - Test	Result - Remark	Verdict
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	No electrode used	P
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		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		P
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

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Clause	Requirement - Test	Result - Remark	Verdict
	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
22.41	No components, other than lamps, containing mercury	No mercury contained	P
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.101	Kettles constructed so that the lid does not fall off when water is poured out (IEC 60335-2-15:2002)		P
	Compliance is checked by the test as specified (IEC 60335-2-15:2002)		P
	Lid not fall off and water only emitted from the spout (IEC 60335-2-15:2002)		P
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)		P
	Compliance is checked by inspection during the test of clause 11		P
22.103	Appliance coupler of cordless kettles constructed to withstand the stresses occurring during normal use (IEC 60335-2-15:2002)	Certified component and test with appliance	P
	Kettle is inserted into and withdrawn from the stand 10 000 times (1,1 times the rated current) (10 times per min)		P
	The test is continued for a further 10 000 times without current flowing		P

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Clause	Requirement - Test	Result - Remark	Verdict
	The kettle is suitable for further use and compliance with 8.1, 16.3, 27.5 and clause 29 not be impaired		P
23	INTERNAL WIRING		
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well-rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		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
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

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Clause	Requirement - Test	Result - Remark	Verdict
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		P
24.1.4	Automatic controls complying with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		
	- thermostats: 10 000		N/A
	- temperature limiters: 1 000	Certified component	P
	- self-resetting thermal cut-outs: 300	Certified component	P
	- voltage maintained non-self-resetting thermal cut-outs: 1 000		N/A
	- other non-self-resetting thermal cut-outs: 30		N/A
	- timers: 3 000		N/A
	- energy regulators: 10 000		N/A
	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)		P
24.1.5	Appliance couplers complying with IEC 60320-1		P
	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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	- 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
24.2	Appliances not fitted with:		
	- switches or automatic controls in flexible cords		P
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	- thermal cut-outs that can be reset by soldering, unless		P
	the solder has a melding point of at least 230 ˚C		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
25.5	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

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Clause	Requirement - Test	Result - Remark	Verdict
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- 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		
	• light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg		N/A
	• ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances	H05VV-F	P
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		
	• heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg		N/A
	• heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances		N/A
	Supply cords for class III appliances adequately insulated		N/A
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N/A
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm²):		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 mm², if the length is less than 2 m (IEC 60335-2-15:2002)	<10A, 0,75 mm², length: 0,75m	P
25.9	Supply cords not in contact with sharp points or edges		P
25.10	Supply cord of class I appliances have a green/yellow core for earthing		P

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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
25.13	Inlet openings so constructed as to prevent damage to the supply cord	The inlet opening is of insulation material	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
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm) .....:	<1Kg, 30N, 0,1Nm	P
	Cord not damaged and max. 2 mm displacement of the cord	Max.0,8mm	P
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	type Y	P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	Constructed so that the cord can only be fitted with the aid of a tool		P
25.20	The insulated conductors of the supply cord for type Y and Z attachment additionally insulated from accessible metal parts	type Y	P
25.101	Supply cords of kettles are not longer than 75 cm, unless they are helically coiled (IEC 60335-2-15:2002)	Length: 0,75m	P
	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		P

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
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
	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 equrfipotential bonding conductors allow connection of conductors of 2.5 to 6 mm², and		N/A
	do not provide earthing continuity between different parts of the appliance, and		N/A
	conductors cannot be loosened without the aid of a tool		N/A
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		P
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
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		P
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		P
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		P

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Clause	Requirement - Test	Result - Remark	Verdict
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω)....:	0,03Ω (Max.)	P
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		N/A
	Impulse voltage test is not applicable:		
	- when the microenvironment is pollution degree 3, or	Parts influenced by vapour	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

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Clause	Requirement - Test	Result - Remark	Verdict
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable.....:	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1	End of heating elements	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		P
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N/A
	the microenvironment is pollution degree 3, or		N/A
	the distances can be affected by wear, distortion, movement of the parts or during assembly		N/A
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree.....:	(see appended table)	P
	Pollution degree 2 applies, unless		P
	- precautions taken to protect the insulation; pollution degree 1	End of heating elements	P
	- insulation subjected to conductive pollution; pollution degree 3	Parts influenced by vapour	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
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(see appended table)	P
	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

IEC 60335-2-15			
Clause	Requirement - Test	Result - Remark	Verdict
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18.....:		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
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

DEVIATION REPORT OF IEC 60335-2-15:2012 from IEC 60335-2-15:2002 + A1:2005 + A2:2008			
Clause	Requirement - Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		
7.1	Indication visible whit kettle in filling position (IEC 60335-2-15)		P
	Soy milk makers: level mark or other means to indicate when they are filled to rated capacity (IEC 60335-2-15)		N/A
	Unless they cannot be filled beyond their rated capacity (IEC 60335-2-15)		N/A
7.12	The instructions for appliances include the substance of the following: (IEC 60335-2-15)		
	This appliance is intended to be used in household and similar applications such as: (IEC 60335-2-15)		P
	- staff kitchen areas in shops, offices and other working environments;		P
	- farm houses;		P
	- by clients in hotels, motels and other residential type environments;		P
	- bed and breakfast type environments.		P
	If the manufacturer wants to limit the use of the appliance to less than the above, this is clearly stated in the instructions (IEC 60335-2-15)		N/A
	The instructions 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)		P
	This requirement normally applies to coffee-makers, cooking pans, milk heaters, pressure cookers, steam cookers, slow cookers, soy milk makers and yoghurt makers (IEC 60335-2-15)		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)		
	- WARNING: "Do not remove the lid while the water is boiling"		P
	The instructions for all appliances include: (IEC 60335-2-15)		
	- a warning to avoid spillage on the connector		N/A
	- details on how to clean the surfaces in contact with food		N/A
	- a warning of potential injury from misuse		N/A
	- a statement that the heating element surface is subject to residual heat after use		N/A

DEVIATION REPORT OF IEC 60335-2-15:2012 from IEC 60335-2-15:2002 + A1:2005 + A2:2008			
Clause	Requirement - Test	Result - Remark	Verdict
	The instructions for soy milk makers also include a statement that care shall be taken when handling the sharp cutting blades, emptying the container and during cleaning (IEC 60335-2-15)		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		
8.1.1	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
9	STARTING OF MOTOR-OPERATED APPLIANCES		
	Requirements and tests are specified in part 2 when necessary		N/A
11	HEATING		
11.3	See Note 101 (IEC 60335-2-15)		N/A
11.7.101	For other kettles: test terminated 5 min after the water has attained 95 ℃		P
11.7.104	Espresso coffee-makers operated until steady conditions are established		N/A
	Other coffee-makers operated for the time necessary to make the maximum quantity of coffee stated in the instructions		N/A
	The container refilled as quickly as possible and the coffee-maker operated again until steady conditions are established		N/A
11.7.106	Soy milk makers operated for a complete operating cycle (IEC 60335-2-15)		N/A
18	ENDURANCE		
	Requirements and tests are specified in part 2 when necessary		N/A
19	ABNORMAL OPERATION		
19.4	Pressure cookers: (IEC 60335-2-15)		
	- all pressure regulating devices rendered inoperative; and		N/A
	- in other than dynamic pressure cookers, all protective devices that vent steam and intentionally weak parts that vent steam rendered inoperative; and		N/A
	- in dynamic pressure cookers, all protective devices, other than intentionally weak parts, that vent steam rendered inoperative		N/A

DEVIATION REPORT OF IEC 60335-2-15:2012 from IEC 60335-2-15:2002 + A1:2005 + A2:2008			
Clause	Requirement - Test	Result - Remark	Verdict
19.7	Soy milk makers operated for one cycle of operation (IEC 60335-2-15)		N/A
19.13	During the test of 19.4, protective devices or intentionally weak parts of dynamic pressure cookers operate before pressure has reached 250 kPa (IEC 60335-2-15)		N/A
19.104	The overloading of a soy milk maker does not result in a hazard (IEC 60335-2-15)		N/A
	Compliance is checked by the test as specified		N/A
	During the test, any flames keep within the enclosure and supporting surface does not ignite		N/A
	After the test, live parts not be accessible		N/A
19.105	When a soy milk maker is disconnected from the supply accidently during normal use, it does not result in a hazard (IEC 60335-2-15)		N/A
	Compliance is checked by the test as specified		N/A
	During the test, any flames keep within the enclosure and supporting surface does not ignite		N/A
	After the test, live parts not be accessible		N/A
20	STABILITY AND MECHANICAL HAZARDS		
20.101	The container and cutting blades of soy milk makers have adequate mechanical strength (IEC 60335-2-15)		N/A
	Compliance is checked by the test as specified		N/A
	Container and cutting blades not broken		N/A
20.102	The rotating parts of soy milk makers not become loose during operation (IEC 60335-2-15)		N/A
	Compliance is checked by inspection and manual test as specified		N/A
	Fastening of screws and nuts in a direction opposite to the direction of rotation of the rotating parts considered to be a suitable means of securing the rotating parts		N/A
20.103	For soy milk makers: lid interlock, if any, constructed so that accidental operation of the appliance is prevented (IEC 60335-2-15)		N/A
	Lid interlock switches are biased-off switches		N/A
	If there is an interlock between the lid and the main switch, the lid is locked when the switch is in the on position		N/A

DEVIATION REPORT OF IEC 60335-2-15:2012 from IEC 60335-2-15:2002 + A1:2005 + A2:2008			
Clause	Requirement - Test	Result - Remark	Verdict
	When the lid is not correctly closed, the switch is locked in the off position		N/A
	Compliance is checked by inspection, by manual test and by applying test probe B of IEC 61032		N/A
22	CONSTRUCTION		
22.7	Dynamic pressure cookers: the pressure is gradually increased hydraulically to 50 kPa in excess of the operating pressure of the pressure relief device or intentionally weak part during the test of 19.4		N/A
22.40	For soy milk makers, any switch controlling the motor also disconnect electronic circuits, if their malfunction would impair compliance with this standard (IEC 60335-2-15)		N/A
	Compliance is checked by the tests of Clause 19 (IEC 60335-2-15)		N/A
22.103	Appliance coupler of cordless appliances constructed to withstand the stresses occurring during normal use (IEC 60335-2-15)		P
	Compliance is checked by the test as specified		P
	Appliance is placed on its stand and withdrawn for:		
	- cordless kettles 10 000 times		P
	- cordless coffee makers 10 000 times		N/A
	- other cordless appliances 6 000 times		N/A
	The test continued without current flowing for a further 10 000 times for cordless kettles and cordless coffee makers, or		P
	6 000 times for other cordless appliances		N/A
	If a single stand is supplied with more than one cordless appliance, the test for each cordless appliance is carried out using the same stand		N/A
	The appliance is suitable for further use and compliance with 8.1, 16.3, 27.5 and clause 29 not be impaired		P
	The test is carried out without current flowing if the connection contacts cannot make or break on load		N/A
22.108	Test not carried out on pressure cookers when the lid is secured by screw clamps or other devices that ensure that the pressure is automatically reduced in a controlled manner before the lid can be removed		N/A

DEVIATION REPORT OF IEC 60335-2-15:2012 from IEC 60335-2-15:2002 + A1:2005 + A2:2008			
Clause	Requirement - Test	Result - Remark	Verdict
22.109	Pressure cookers constructed so that the pressure in the container is not excessive when the lid is not closed or is incorrectly fitted (IEC 60335-2-15)		N/A
	Compliance is checked by the test as specified		N/A
	Pressure not exceeding 4,0 kPa		N/A
22.112	Soy milk makers constructed so that steam or hot water are not ejected which may expose the user to a hazard (IEC 60335-2-15)		N/A
22.113	Appliances with moving mechanical parts constructed so that lubricants are prevented from polluting food compartments (IEC 60335-2-15)		N/A
22.114	Appliances constructed so that food or liquids are prevented from penetrating into places that could cause electrical or mechanical faults (IEC 60335-2-15)		P
24	COMPONENTS		
24.1.3	Switches incorporated in dynamic pressure cookers for controlling heaters are subjected to 50 000 cycles of operation and are tested under the conditions of Clause 11 with the appliance supplied at rated voltage (IEC 60335-2-15)		N/A
24.1.5	Thermal controls are not allowed in connectors complying with the standard sheets of IEC 60320-1 (IEC 60335-2-15)		P
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		
25.22	Soy milk maker inlets located so that pollution by soy milk is unlikely to occur during normal use (IEC 60335-2-15)		N/A
25.101	The length of the cord is measured between the plug and the point where the cord or cord guard enters the appliance		P

DEVIATION REPORT OF EN 60335-2-15:2016 FROM IEC 60335-2-15:2012			
Clause	Clause	Clause	Clause

7.1	When the provisions of footnote b to Table Z101 apply, appliance marked with:		
	• the substance of “CAUTION: Hot surface”, or		N/A
	• symbol IEC 60417-5041		N/A
	The warning is put on the surface of the appliance having the highest temperature and it is visible during normal operation		N/A
7.10	Accessible switch required by 22.40 distinguished from other manual devices by means of shape, size, surface texture, position, etc.		P
	An indication that the device has been operated is given by:		
	• a tactile feedback, or		P
	• an audible and visual feedback		P
	A selector switch with an off-position clearly identifiable is allowed		N/A
	An ON/OFF switch, if any, is considered a suitable device to stop operational functions		P
	A plug is not considered a suitable device to stop operational functions, as it can be difficult to be reached by vulnerable persons		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(EN 60335-1: 2012)	Replaced by EN 60335-2-15:2016	N/A
	- children shall not play with the appliance (EN 60335-1: 2012)	Replaced by EN 60335-2-15:2016	N/A
	- cleaning and user maintenance shall not be made by children without supervision (EN 60335-1: 2012)	Replaced by EN 60335-2-15:2016	N/A
	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: 2016)		
	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:		

DEVIATION REPORT OF EN 60335-2-15:2016 FROM IEC 60335-2-15:2012			
Clause	Clause	Clause	Clause
	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:		
	This appliance can be used by children aged from 3 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Cleaning and user maintenance shall not be made by children unless they are aged from 8 years and above and supervised. Keep the appliance and its cord out of reach of children aged less than 3 years		N/A
	The instructions shall also include the substance of the following:		
	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		N/A
7.14	Height of symbol IEC 60417-5041, at least 8 mm		N/A
	Height of the warning “CAUTION. Hot surface”, at least 4 mm (measured on the capital letters)		N/A
11.8	In Table 3 the row “External enclosure of motor-operated appliances, expect handles held in normal use” replaced by Table Z101		P
	Table Z101 added		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	Kettles	P

DEVIATION REPORT OF EN 60335-2-15:2016 FROM IEC 60335-2-15:2012			
Clause	Clause	Clause	Clause

	The appliance is supplied at rated voltage and operated under normal operation		P
	Temperatures rises are not measured on:		
	• the lids		P
	• surfaces within 25 mm from - the edge of the lid - the ventilation openings - the edge of the hot functional surface		P
	• enclosure at a distance within 25 mm from the heating element		P
	• 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 (EN 60335 2 15: 2016)		N/A
	The appliance is supplied at rated voltage and operated under normal operation		N/A
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		P

Appendix: EN 60335-2-15:2016/A11:2018			
7	**Marking and instructions**		
7.1	Addition:		
	Pot coffee-makers shall have a level mark to indicate when they are filled to rated capacity.		N/A
	This indication shall be visible when the **pot coffee-maker** is in the filling position.		N/A
7.12	Addition:		
	structions for pot coffee-makers shall contain the substance of the following:		
	CAUTION: Never fill the pot coffee-maker above the maximum level since hot foaming coffee or other liquids (e.g. milk) might overflow during heating.		N/A
	In 7.12 replacement, add pot coffee-maker		N/A
11	**Heating**		
	Add “pot coffee-makers“ in the first sentence of 11.Z101.		N/A
22	**Construction**		N/A
	Add a new subclause:		N/A
22.Z101	For pot coffee-maker the operation shall not give a spillage of foaming coffee in normal use.		N/A
	During the test no overflow shall be observed.		N/A

Appendix: EN 60335-1:2012/A13:2017			
ZZA	**ANNEX ZZA** (INFORMATIVE) **RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96} AIMED TO BE COVERED**		
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		P

ZZB	**ANNEX ZZB** (INFORMATIVE) **RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED**		N/A
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		N/A
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		N/A
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		N/A

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		—
	Limit ……100%	Measured max. : <10 %	P

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	dP (W, %)	Required dP (W, %)	Remark
PK-S1406	1850	1820	-1,6%	-10%~+5%	Supplied at 220V
	2200	2179	-1,0%	-10%~+5%	Supplied at 240V

11.8	TABLE: Heating test, thermocouples (PK-S1406)		P
	Test voltage (V) .....:	2530W, 256V	—
	Ambient (°C) .....:	23	—

Thermocouple locations	dT (K)	Max. dT (K)
Supply cord	15	50
Handle	16	60
Internal wiring	51	155(T-25)
Wood support	41	65
Knob of lid	50	60
Ambient of temperature limiter (U9201)	73	100(T-25)
Ambient of thermal cut out (U9201)	78	100(T-25)
Ambient of temperature limiter (KSD-889)	74	100(T-25)
Ambient of thermal cut out (KSD-889)	77	100(T-25)
Ambient of temperature limiter (TM-XH-D)	74	100(T-25)
Ambient of thermal cut out (TM-XH-D)	77	100(T-25)
Knob of temperature limiter	15	60
Indicator cover	18	--
Enclosure(Water level)	75	--
Enclosure of stand	33	--

11.Z101	TABLE: Heating test, thermocouples (PK-S1406)			P
	Test voltage (V) ..... :		240	—
	Ambient (°C) .....:		23	—
Thermocouple locations		Dt (K)	Max. Dt (K)	Twice Max. Dt (K)
Matel enclosure		41	45	--

13.2	TABLE: Leakage current		P
	Heating appliances: 1.15 x rated input (W) .....:	Refer to Cl.11.8	—
	Motor-operated and combined appliances: 1.06 x rated voltage (V) .....:	N/A	—

Leakage current between	I (mA)	Max. allowed I (mA)
L/N - Earthing metal parts	0,05max	0,75
L/N - non-earthing enclosure	0,01max peak	0,35 peak
L/N - knob/handle	0,01max peak	0,35 peak

13.3	**TABLE: Electric strength**	P

Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
Parts isolated with basic insulation	1000	No
Parts isolated with supplement insulation	1750	No
Parts isolated with reinforced insulation	3000	No

16.2	**TABLE: Leakage current**		P
	Single phase appliances: 1.06 x rated voltage (V) .....:	254,4V	—
	Three phase appliances 1.06 x rated voltage divided by √3 (V) .....:	N/A	—

Leakage current between	I (mA)	Max. allowed I (mA)
Live parts - earthing metal parts	0,08max	0,75
Live parts - non-earthing enclosure	0,01max	0,25
Live parts - knob/handle	0,01max	0,25

16.3	**TABLE: Electric strength**	P

Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
Parts isolated with basic insulation	1250	No
Parts isolated with supplement insulation	1750	No
Parts isolated with reinforced insulation	3000	No

19.13	**TABLE: Abnormal operation, temperature rises (PK-S1406)**	P

Thermocouple locations	Max. temperature rise measured, dT (K)				Max.temperature rise limit, dT (K)
	Cl.19.3		Cl.19.4	Cl.19.101/ Cl.19.102	
	Empty	With water			
Wooden support	22	22	30	24	150
Supply cord	24	29	33	32	150
Indicator cover	18	22	--	20	—

Plastic enclosure	53	60	--	57	—
Enclosure of stand	38	40	--	38	—
Water level	31	62	--	59	—

24.1	**TABLE: Components information**				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Temperature controller for PK-S1401, PK-S1401E, PK-S1408, PK-S1406	Strix Limited	U9201	100-240V~, 10A, T125, Temperature limiter: Tf80, 1E4 Thermal cut-out: Tf120, 3000	EN 60730-1 EN 60730-2-9 EN 60335-2-15	BEAB*/ 22176+ test with appliance
-alternative Cordless connector system	Strix Limited	C9201	100-240V~, 10A , Class I	EN 60320-1 EN 60335-1 EN 60335-2-15	BEAB*/ 22150+ test with appliance
Temperature controller for PK-S1401, PK-S1401E, PK-S1408, PK-S1406	Yueqing City Fada Electric Appliance Co., Ltd.	KSD-889	220-250V~, 10A, T125, Temperature limiter: Tf80, 1E4 Thermal cut-out: Tf120, 3000	EN 60730-1 EN 60730-2-9 EN 60335-2-15	TUV*/ B 058452 0063 Rev.01
-alternative Cordless connector system	Yueqing City Fada Electric Appliance Co., Ltd.	SL-168-3	220-250V~, 10A , Class I	EN 60320-1 EN 60335-1 EN 60335-2-15	TUV*/ B 058452 0061 Rev.01
Temperature controller for PK-S1401, PK-S1401E, PK-S1408, PK-S1406	Taizhou Tianming Electric Appliance CO., LTD.	TM-XH-D	100-240V~, 13A, T125, Temperature limiter: Tf80, 1E4 Thermal cut-out: Tf120, 3000	EN 60730-1 EN 60730-2-9 EN 60335-2-15	TUV */ B 055675 0042 Rev. 01
Cordless interface	Taizhou Tianming Electric Appliance CO., LTD.	TM-XA-2B	100-240V~, 13A, Class I	EN 60320-1 EN 60320-2-4 EN 60335-1 EN 60335-2-15	TUV*/ B 055675 0040 Rev. 02
All above listed components are new added, others refer to CDF for detail					

29.1	**TABLE: Clearances**						P
	Overvoltage category..... ... :			II			—
		Type of insulation:					
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark	
330	0,2* / 0,5 / 0,8**	-	-	-	-	N/A	

500	0,2* / 0,5 / 0,8**	-	-	-	-	N/A
800	0,2* / 0,5 / 0,8**	-	-	-	-	N/A
1 500	0,5 / 0,8** / 1,0***	-	-	-	-	N/A
2 500	**1,5** / 2,0***	X	X	-	X	P
4 000	**3,0** / 3,5***	-	-	X	-	P
6 000	5,5 / 6,0***	-	-	-	-	N/A
8 000	8,0 / 8,5***	-	-	-	-	N/A
10 000	11,0 / 11,5***	-	-	-	-	N/A

Supplementary information:

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

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

>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A

>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A
Supplementary information: *) Material group IIIb is allowed if the working voltage does not exceed 50 V **) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation											

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

Photo 1.

Description: Over view of PK-S1406

Photo 2.

Description: Over view of PK-S1406

Photo 3.

Description: Side view of PK-S1406

Photo 4.

Description: Front view of PK-S1406

Photo 5.

Description: Top view of PK-S1406

Photo 6.

Description: Bottom view of PK-S1406

Photo 7.

Description: Water level view of PK-S1406

Photo 8.

Description: Switch knob view of PK-S1406

Photo 9.

Description: Lid open view of PK-S1406

Photo 10.

Description: Internal view of PK-S1406

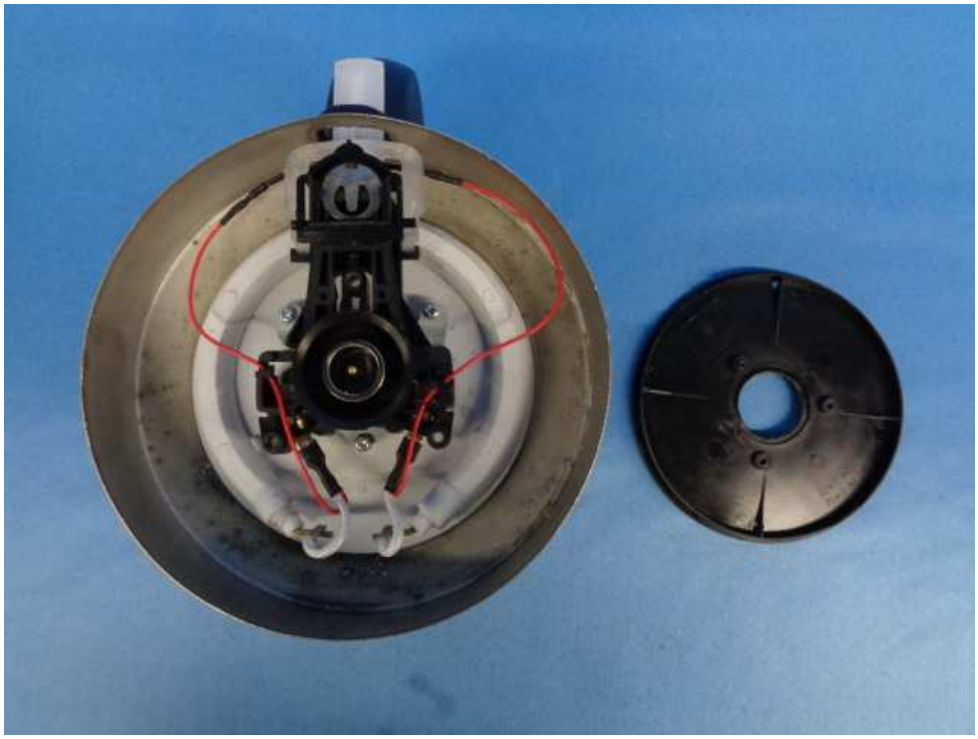

Photo 11.

Description: Stand view of PK-S1406

Photo 12.

Description: Internal stand view of PK-S1406

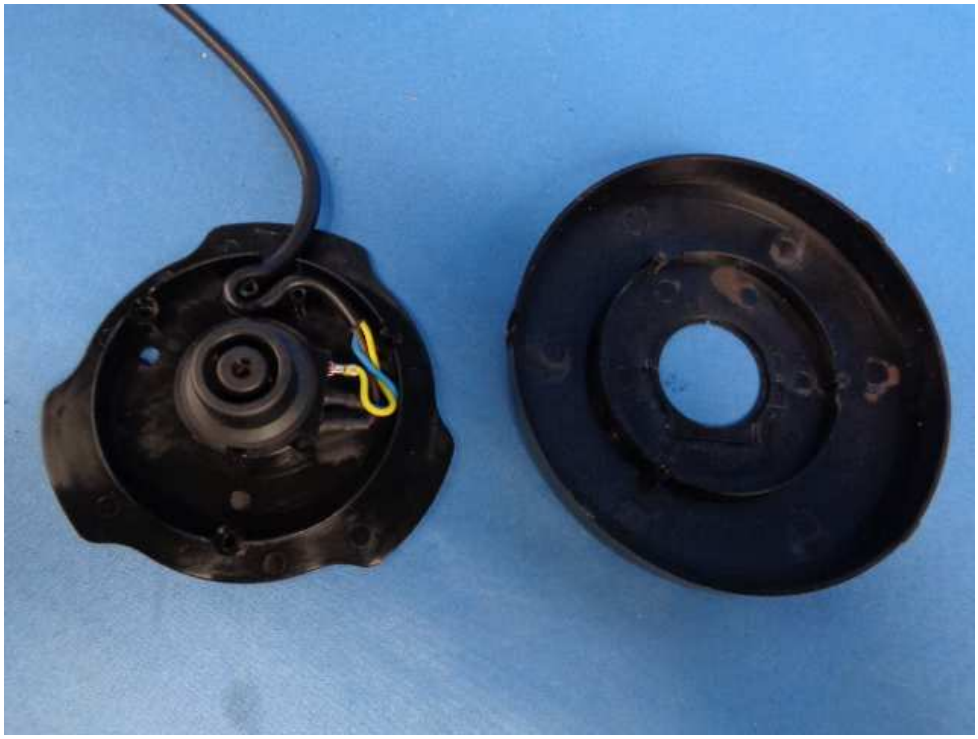

Photo 13.
Description: Thermal control and Cordless connector system (U9201 and C9201 of Strix)

Photo 14.
Description: Thermal control and Cordless connector system (U9201 and C9201 of Strix)

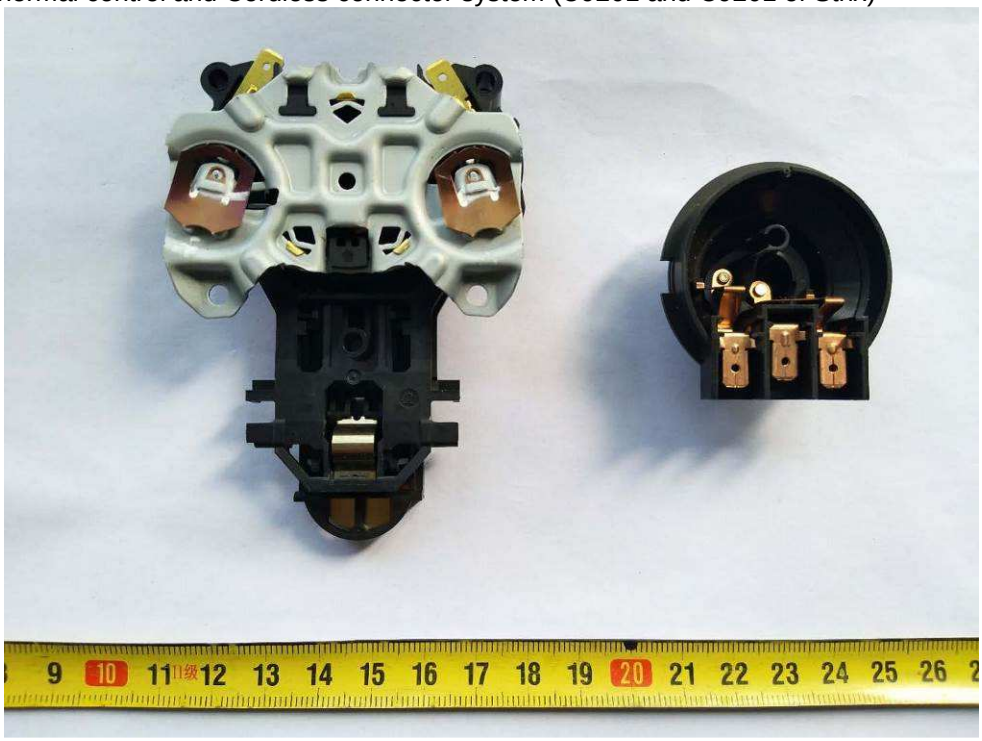

Photo 15.
Description: Thermal control and Cordless connector system (KSD-889 and SL-168-3 of Fada)

Photo 16.
Description: Thermal control and Cordless connector system (KSD-889 and SL-168-3 of Fada)

Photo 17.
Description: Thermal control (include temperature limiter and thermal cut-out) and Cordless connector system (TM-XH-D, TM-XA-2B)

Photo 18.
Description: Thermal control (include temperature limiter and thermal cut-out) and Cordless connector system (TM-XH-D, TM-XA-2B)

Photo 19.

Description: Earthing view of PK-S1406