Test Report issued under the responsibility of:

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

Report Number. .....:	140300061HZH-001
Date of issue .....:	2014-04-23;Amendment 3:2014-11-03
Total number of pages.....:	39 pages of test report(including 4 pages photograph)
Applicant's name.....:	NINGBO LONGLEAD ELECTRIC APPLIANCES CO.,LTD
Address .....:	NO.69,QIYEDONG ROAD, ZHOUXIANG TOWN,CIXI,NINGBO, China
Test specification:	
Standard.....:	IEC 60335-2-9:2002 (Fifth edition) + A1:2004 + A2:2006 in conjunction with IEC 60335-1:2010 (Fifth Edition) EN 60335-2-9:2003+A1:04+A2:06+A12:07+A13:10+AC:11+ EK1-AG2:2014-04 in conjunction with EN 60335-1:2012 and EN 62233:2008
Test procedure .....:	--
Non-standard test method……..:	EK1-AG2:2014-04
Test Report Form No.....:	IEC60335_2_9J
Test Report Form(s) Originator.....:	LCIE
Master TRF.....:	Dated 2013-11

Test item description .....:	Grill for Household use
Trade Mark .....:	--
Manufacturer.....:	Same as applicant
Model/Type reference .....:	LD-600, LD-601, LD-601A, LD-602, LD-602A, LD-603, LD-603A, LD-604, LD-604A, LD-605, LD-606
Ratings .....:	220-240V~,50Hz, Class I for all models LD-600:1500W LD-601, LD-601A, LD-602, LD-602A, LD-605, LD-606:2000W LD-603, LD-603A, LD-604, LD-604A:1800W

Testing procedure and testing location:		
☒ **Testing Laboratory:**	Intertek Testing Services Hangzhou Ltd.	
Testing location/ address ..... :	16 No. 1 Ave., Xiasha Economic Development District, Hangzhou 310018, China	
☐ **Associated CB Testing Laboratory:**		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	Paul Tang	
Approved by (name + signature) ..... :	Navy Wang	
☐ **Testing procedure: TMP**		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	N/A	
Approved by (name + signature) ..... :	N/A	
☐ **Testing procedure: WMT**		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	N/A	
Witnessed by (name + signature) .... :	N/A	
Approved by (name + signature) ..... :	N/A	
☐ **Testing procedure: SMT**		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	N/A	
Approved by (name + signature) ..... :	N/A	
Supervised by (name + signature) .. :	N/A	

List of Attachments (including a total number of pages in each attachment): **Appendix: Constructional data form (CDF)**	
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.	
Tests performed (name of test and test clause): **Power Input Measurements: Cl.10.1** **Heating Test: Cl.11.8** **Leakage Current Test: Cl.13.2** **Electric Strength Test: Cl.13.3** **Humidity Test: Cl.15.3** **Leakage Current Test: Cl.16.2** **Electric Strength Test: Cl.16.3** **Abnormal Operation – Restricted Heat Dissipation Test: Cl.19.2, Cl.19.3** **Abnormal Operation - Thermostat Short-Circuited Test: Cl.19.4** **Mechanical Hazards and Impact Test:Cl.21.1** **Pull Test:Cl.22.12** **Power Cord Pull and Torque Test:Cl.25.15** **Ground Impedance Test:Cl.27.5**	**Testing location:** **16 No. 1 Ave., Xiasha Economic Development District, Hangzhou 310018, China**
Summary of compliance with National Differences **List of countries addressed:** **National differences for Germany has been checked** ☒ **The product fulfils the requirements of EN 60335-2-9:2003+A1:04+A2:06+A12:07+A13:10+AC:11 +EK1-AG2:2014-04 in conjunction with EN 60335-1:2012 and EN 62233:2008**	

Copy of marking plate

(Representative)

Grillgerät
LD-600
220-240~ 50Hz 1500W

NINGBO LONGLEAD ELECTRIC
APPLIANCES CO.,LTD

Test item particulars ..... :	
Classification of installation and use ..... :	**Portable appliance for household indoor use only**
Supply Connection..... :	**Type Y**
..... :	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing .....:	
Date of receipt of test item .....:	2014-10-10
Date (s) of performance of tests.....:	2014-10-10 to 2014-10-27

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.
PAH test according to ZEK 01.4-08 is considered and passed, please refer to PAH test report 140300061HZH-PAH1 for detail

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 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 LONGLEAD ELECTRIC APPLIANCES CO.,LTD NO.69,QIYEDONG ROAD, ZHOUXIANG TOWN,CIXI,NINGBO, China

General product information:

The appliances covered by this report are grills for household indoor use. Thermostat and thermal link are incorporated in the appliance for safety purpose.
Model similarity:

1. All models have similar construction,the main difference among them are the shape and size of heating plate,heating element,material of handle and rated power input;
2. The only difference between LD-601 and LD-601A is that LD-601 has metal handle while LD-601A's is bakelite,so do LD-602 and LD-602A, LD-603 and LD-603A, LD-604 and LD-604A;
3. All models except LD-600 have oil container;
4. All models have two optional coatings:Teflon coating or ceramic coating.

LD-600, LD-603, LD-605 are selected for all the tests,other models are also tested if mentioned.

There are three types of connector used for all models(Jinze CTW-300, Zhaotai CTW-300A, Zhaotai CTW-300),all three types of connector are tested,only the most unfavourable test data recorded.

Amendment 3

The original test report ref. No. 140300061HZH-001 dated on 2014-04-23 with Amendment 1 dated on 2014-05-26 and Amendment 2 dated on 2014-06-18 was modified on 2014-11-03 to include the following addition:

1. Add two alternative Connector with thermostat(KaiKai CTW300C, Kaneta CTW-300) for all models(related Thermostat of connector also added)

.After review,tests need to be done.

Clause concerned: Cl.7, Cl.10, Cl.11, Cl.13, Cl.15, Cl.16,Cl.19,Cl.21,Cl.22,Cl.25,Cl.27
Table concerned: Table 10.1, Table 11.8, Table 11.Z102,Table 13.2, Table 13.3, Table 16.2, Table 16.3,Table 19.13,Table 24.1, Table 29.1**,** Table 29.2

LD-605 with Connector KaiKai CTW300C, and Kaneta CTW-300 are selected to do the relevant tests and the most unfavourable test data recorded.

For Cl.30.1, temperature rise not higher than the original report, so Cl.30.1 doesn't conducted.

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
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
	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
	For toasters having a crumb tray : use of test probe 41 of IEC 61032 : no contact through crumb tray with live parts that are disconnected by double pole switch using (IEC 60335-2-9)		N/A
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N/A
8.2	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
	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		N/A
	the rated power input is related to the arithmetic mean value		P

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Power input of induction hotplates measured separately (IEC 60335-2-9)		N/A
11	HEATING		
11.1	No excessive temperatures in normal use		P
	Compliance for toasters is also checked by the test of 11. 101 (IEC 60335-2-9)		N/A
11.2	The appliance is held, placed or fixed in position as described.....:	Placed in test corner and away from the walls	P
	Radiant grills and raclette grills that are loaded from the front, rotary grills, ovens, breadmakers, cookers and hotplates are placed with their backs as near as possible to one of the walls of the test corner and away from the other wall ..... (IEC 60335-2-9)		N/A
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
	If magnetic field of an induction hotplate unduly influences the results, temperature rises can be determined using platinum resistances or equivalent means (IEC 60335-2-9)		N/A
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) .....:	LD-605: 2504W Tested with thermal link Tf117℃	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 60335-2-9)		N/A
11.7	Tests carried out in compliance with the paragraphs N°1 to 11 (IEC 60335-2-9)		P
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 .....:	(see appended table)	P
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	When an appliance connector incorporates a thermostat, the temperature rise limit for the pins of the inlet does not apply (IEC 60335-2-9)		N/A
	The temperature rise limits of motors, transformers, components of electronic circuit and parts directly influenced by them may be exceeded when the appliance is operated at 1,15 times rated power input (IEC 60335-2-9)		N/A
	Cheese used in sandwich toasting attachments doesn't flow into places where it can give rise to a hazard, such as reducing clearances or creepage distances below the values specified in Clause 29 (IEC 60335-2-9).		N/A
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
	grill incorporated in oven, oven or grill operated most unfavourable (IEC 60335-2-9).		N/A
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		N/A
	For other appliances, a low impedance ammeter may be used		P
	Leakage current measurements .....:	(see appended table)	P

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	If earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn connected to earthed metal not exceeding 0,75 mA (IEC 60335-2-9)		N/A
	If no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn not exceeding 0,25 mA (IEC 60335-2-9)		N/A
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4.....:	(see appended table)	P
	test voltage of 1000V if earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N/A
	test voltage of 3000 V if no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate (IEC 60335-2-9).		N/A
	No breakdown during the tests		P
15.3	Appliances proof against humid conditions		P
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		P
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		P
	Humidity test for 48 h in a humidity cabinet	23^{o}C, 93%R.H	P
	Reassembly of those parts that may have been removed		P
	The appliance withstands the tests of clause 16		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Tests carried out at room temperature and not connected to the supply		P
	For hotplates, the tests are carried out with a vessel as specified for normal operation placed on each cooking zone (IEC 60335-2-9).		P
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V).....:	254,4V	P

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	If earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn connected to earthed metal not exceeding 0,75 mA (IEC 60335-2-9)		N/A
	If no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate, leakage current between live parts and each of vessels in turn not exceeding 0,25 mA (IEC 60335-2-9)		N/A
16.3	Electric strength tests according to table 7.....:	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified .....:	(see appended table)	P
	test voltage of 1250 V if earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate. (IEC 60335-2-9)		N/A
	test voltage of 3000 V if no earthed metal between live parts and surface of glass-ceramic (or similar) of hotplate. (IEC 60335-2-9)		N/A
	No breakdown during the tests		P
19	ABNORMAL OPERATION		
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe .....:	(see appended table)	N/A

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		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
	Tests of 19.4 and 19.5 are only applicable to: -breadmakers, contact grills, food dehydrators - ovens, roasters, hotplates, cookers, rotary grills if they incorporate a timer or if their instructions indicate a cooking operation longer than 1h (IEC 60335-2-9)	Grill	P
	Toasters are subjected to the tests 19.101 and 19.102 (IEC 60335-2-9)		N/A
	Induction hotplates are subjected to the tests 19.103 and 19.104 (IEC 60335-2-9)		N/A
19.2	Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0.85 times rated power input (W) .....:	LD-605: 1555W	P
	Radiant grills, raclette grills that are loaded from the front , rotary grills, ovens, hotplates and cookers are placed as near as possible to the walls of the test corner ..... (IEC 60335-2-9)		N/A

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	They are tested empty with lids open or closed whichever is the more unfavourable ..... (IEC 60335-2-9)		N/A
	Hotplates are operated without a vessel and with the controls adjusted to the highest setting (IEC 60335-2-9)		N/A
	Induction hotplates are operated under conditions of clause 11 but with empty vessels, controls adjusted to the highest setting (IEC 60335-2-9)		N/A
	Cookers are only tested with the heating unit that results in the most unfavourable conditions, their controls adjusted to the highest setting. However ovens are operated if they do not have an indicating lamp to show when they are switched on, controls adjusted to the highest setting (IEC 60335-2-9)		N/A
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W) .....:	LD-605: 2700W	P
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited	LD-605: until steady condition	P
	Air-circulating fans of food dehydrators disconnected (IEC 60335-2-9)		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	Thermostat and thermal link are in two sides of heating element	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
19.13	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

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	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	P
	- supplementary insulation (V).....:	1750V	P
	- reinforced insulation (V) .....:	3000V	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
	During the test of 19.102 any flame or smoke from the bread are ignored (IEC 60335-2-9)		N/A
	Temperature rise of the windings of induction hotplates not exceeding the values specified in 19.7 (IEC 60335-2-9)		N/A
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

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	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	(see appended table)	P
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
	For appliances intended for outdoor use, the impact energy is 0.7J (IEC 60335-2-9)		N/A
	Appliances incorporates visibly glowing heating elements located at the top of the oven and accessible to the test probe 41 of IEC 61032 (IEC 60335-2-9)		N/A
	For hotplates with surfaces of glass-ceramic or similar, three blows applied to parts surfaces not exposed to the test of 21.101, impact energy 0,70J ± 0,05 J. (IEC 60335-2-9).		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
22	CONSTRUCTION		
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless	Not exposed to such substances	P
	the substance has adequate insulating properties		N/A

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
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, indicator cover	P
	Obvious locked position of snap-in devices used for fixing such parts	Indicator cover	P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described	50N push for all parts, 50N pull for enclosure of Connector, thermostat knob 30N pull force for indicator cover 2Nm for thermostat knob	P
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		N/A
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied	Knobs	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
22.18	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		P
	impregnated		N/A

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos	No such substances	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
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
22.34	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

IEC 60335-9			
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		P
	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 components containing mercury	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
	the appliance switches off automatically or can operate continuously without hazard		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		
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) .....:	<4KG, 60N & 0,25Nm torque applied	P
	Cord not damaged and max. 2 mm displacement of the cord	Max. 0,9mm	P
27	PROVISION FOR EARTHING		
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P

IEC 60335-9			
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
	No earthing via flexible metal tubes, coiled springs and cord anchorage (IEC 60335-2-9)		P
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 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		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		P
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		P
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P

IEC 60335-9			
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 :0,05Ω	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		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

IEC 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	Lacquered conductors of windings considered to be bare conductors		N/A
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16:	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage .....:	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		N/A
29.1.4	Clearances for functional insulation are the largest values determined from:		
	- table 16 based on the rated impulse voltage .....:	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N/A
	the microenvironment is pollution degree 3, or		P
	the distances can be affected by wear, distortion, movement of the parts or during assembly		N/A
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		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 60335-9			
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		N/A
	- precautions taken to protect the insulation; pollution degree 1	End of the heating element	P
	- insulation subjected to conductive pollution; pollution degree 3		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	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
	Pollution degree 3 applies, unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance (IEC 60335-2-9)	All parts except the end of heating element	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 60335-9			
Clause	Requirement + Test	Result - Remark	Verdict
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 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
	Requirement not applied to the sheath of a visibly glowing heating element that is inaccessible to test probe 41 of IEC 61032 (IEC 60335-2-9)		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P

IEC60335_2_9J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-2-9
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Household and similar electrical appliances – Safety –
Part 2: Particular requirements for grills, toasters and similar cooking appliances

Differences according to:	EN 60335-2-9:2003+A1:04+A2:06+A12:07+A13:10+AC:11+EK1-AG2:2014-04 used in conjunction with EN 60335-1:2012 EN 62233:2008
Attachment Form No.:	EU_GD_IEC60335_2_9J
Attachment Originator:	LCIE
Master Attachment:	2014-01

IEC60335_2_9J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	CENELEC COMMON MODIFICATIONS		
7.10	Devices used to start/stop operational functions of the appliance distinguished from other manual devices by means of shape, size, surface texture, position, etc.		P
	Devices used to start/stop operational functions of the appliance, if any, shall be distinguished from other manual devices by means of shape, or size, or surface texture, or position, etc. A tactile or an audible and visual feedback shall give an indication that the device has been operated (EN 60335-2-9)		P
	An indication that the device has been operated is given by:		
	• a tactile feedback, or		N/A
	• an audible and visual feedback		P
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

IEC60335_2_9J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
11.1	For ovens, rotary grills, rotisseries and cookers, compliance is also checked by the test of 11.Z101. (EN 60335-2-9)		N/A
	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills, griddles, barbecues, hot plates, candy floss, popcorn makers, compliance is also checked by the test of 11.Z102. (EN 60335-2-9)	Grills	P
	For breadmakers and food dehydrators, compliance is also checked by the test of 11.Z103. ..... (EN 60335-2-9)		N/A
	For toasters, compliance is also checked by test of 11.Z104. ..... (EN 60335-2-9)		N/A
	For roasters, compliance is also checked by test of 11.Z105. ..... (EN 60335-2-9)		N/A
	For all other types of appliances, compliance is checked by submitting the appliance to the tests of the nearest mentioned relevant type of appliance. (EN 60335-2-9)		N/A
11.3	For flat surfaces, temperature rises are measured using the probe of figure Z101(or any measuring instrument giving the same results), applied with a force of 4 N ± 1 N. ..... (EN 60335-2-9)	(see appended table)	P
11.8	Footnotes to “External enclosure of motor-operated appliances” to be taken into account		N/A
11.Z102	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills, griddles, the temperature rise limits for top surfaces in table Z101 apply. (EN 60335-2-9)	Replaced by EN 60335-2-9/A13	N/A
	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills and griddles, barbecues, hot plates, candy floss, popcorn makers, the temperature rise limits in Table Z101 apply. The appliance is supplied at rated power and operated under normal operation. (EN 60335-2-9)	grills	P

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

10.1	**TABLE: Power input deviation**				P
Input deviation of/at:	**P rated (W)**	**P measured (W)**	**Δ P**	**Required Δ P**	**Remark**
LD-605 with connector KaiKai CTW300C	2000	1970	-1,5%	-10% ~ +5%	Supplied at 230V
LD-605 with connector Kaneta CTW-300	2000	1970	-1,5%	-10% ~ +5%	Supplied at 230V
Supplementary information:					

11.8	**TABLE: Heating test, thermocouples (LD-605 with connector KaiKai CTW300C)**		P
	Test voltage (V).....:	260	—
	Ambient (°C).....:	23	—

Thermocouple locations	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Supply cord	15	50
Internal wire	19	155(T-25)
Ambient of thermostat	23	130(T-25)
Mounting surface of thermostat	26	--
Indicator cover	15	For Cl.30
Enclosure of connector	47	For Cl.30
Enclosure of inlet	73	For Cl.30
Wood support	7	75
Insulation of thermal link	22	175(T-25)
Handle	8	60
Handle(25mm around)	9	60
Knob	3	60
Knob(25mm around)	20	60
Handle of oil container	13	60
Handle of oil container(25mm around)	20	60
Supplementary information:		

11.8	**TABLE: Heating test, thermocouples (LD-605 with connector Kaneta CTW-300)**		P
	Test voltage (V).....:	260	—

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

	Ambient (°C).....:	23	**—**

Thermocouple locations	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Supply cord	12	50
Internal wire	15	155(T-25)
Ambient of thermostat	16	95(T-25)
Mounting surface of thermostat	19	--
Indicator cover	9	For Cl.30
Enclosure of connector	36	For Cl.30
Enclosure of inlet	68	For Cl.30
Wood support	6	75
Insulation of thermal link	22	175(T-25)
Handle	6	60
Handle(25mm around)	6	60
Knob	7	60
Knob(25mm around)	17	60
Handle of oil container	11	60
Handle of oil container(25mm around)	17	60
Supplementary information:		

11.Z102	TABLE: Temperature rise limits for surfaces LD-605 with connector KaiKai CTW300C		P	
	Ambient (℃):		23	
	Test voltage (V):		241	
		dT (K)	Max. dT (K)	Twice Max. Dt (K)
Bare metal		42	45	N/A
Coated metal		--	55	N/A
Glass and ceramic		--	60	N/A
Plastic and plastic coating > 0,3 mm c		32	65	N/A

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

11.Z102	TABLE: Temperature rise limits for surfaces LD-605 with connector Kaneta CTW-300	P	
	Ambient (℃):	23	
	Test voltage (V):	242	
	dT (K)	Max. dT (K)	Twice Max. Dt (K)
Bare metal	39	45	N/A
Coated metal	--	55	N/A
Glass and ceramic	--	60	N/A
Plastic and plastic coating > 0,3 mm c	30	65	N/A

13.2	**TABLE: Leakage current**		P
	Heating appliances: 1.15 x rated input (W)...:	Same as Cl.11.4	—
	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		Max. 0,05	0,75
L/N – Enclosure (with metal foil or ungrounded metal parts)		Max. 0,02 peak	0,35 peak
L/N – Knob/handle		Max. 0,02 peak	0,35 peak
Supplementary information:			

13.3	**TABLE: Dielectric strength**		P
Test voltage applied between:		**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**
Parts isolated with basic insulation		1000	No
Parts isolated with supplementary insulation		1750	No
Parts isolated with reinforced insulation		3000	No
Supplementary information:			

16.2	**TABLE: Leakage current**	P

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

	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	Max. 0,06	0,75
Live parts – Enclosure (with metal foil or ungrounded metal parts)	Max. 0,02	0,25
Live parts – Knobs/handle	Max. 0,02	0,25
Supplementary information:		

16.3	**TABLE: Dielectric strength**	P

Test voltage applied between:	**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**
Parts isolated with basic insulation	1250	No
Parts isolated with supplementary insulation	1750	No
Parts isolated with reinforced insulation	3000	No
Supplementary information:		

19.13	**TABLE: Abnormal operation, temperature rises(LD-605 with connector KaiKai CTW300C)**	P

Thermocouple locations	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**
Wood support	48	150
Supply cord	45	150
Enclosure of connector	143	--
Indicator cover	45	--
Enclosure of inlet	90	--
Supplementary information:		

19.13	**TABLE: Abnormal operation, temperature rises(LD-605 with connector Kaneta CTW-300)**	P

Thermocouple locations	**Max. temperature rise measured, Δ T (K)**	**Max. temperature rise limit, Δ T (K)**

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Clause	Requirement - Test	Result - Remark	Verdict

Wood support	43	150
Supply cord	42	150
Enclosure of connector	138	--
Indicator cover	41	--
Enclosure of inlet	89	--
Supplementary information:		

24.1	**TABLE: Components**				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Connector with thermostat for all models -alternative	HaiYan KaiKai Electrical Appliance Co., Ltd.	CTW300C	AC 250V, 10A Max T of pin:155 °C Diameter of pin: 3,7mm	EN 60320-1 EN 60335-2-9	TUV*/R5011 4749 +test with appliance
-alternative	Zhejiang Kaneta Electrics Co., Ltd.	CTW-300	AC 250V, 10A Max T of pin:120 °C Diameter of pin: 3,7mm	EN 60320-1 EN 60335-2-9	TUV*/R5019 0132 +test with appliance
Thermostat for all models -alternative	HaiYan KaiKai Electrical Appliance Co., Ltd.	CTW300	AC 250V, 10A, set operating temp 55 °C,T155, 1E4	EN 60730-2-9	TUV*/R5011 4749
-alternative	Zhejiang Kaneta Electrics Co., Ltd.	CTW-300	AC 250V, 10A, set operating temp 55 °C,T120, 1E4	EN 60730-2-9	TUV*/R5019 0132

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	

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

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

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Clause	Requirement - Test	Result - Remark	Verdict

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

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

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

Supplementary information:

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

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	**Creepage distance (mm) Pollution degree**							
	1	**2**			**3**			
		Material group			**Material group**			
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**Verdict / Remark**
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	N/A
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	N/A
250	0,42	1,0	1,4	2,0	2,5	2,8	**3,2**	P
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	N/A
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A

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

>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**

Appendix – Photographs

Photo 1.

Description: connector(KaiKai CTW300C) view1

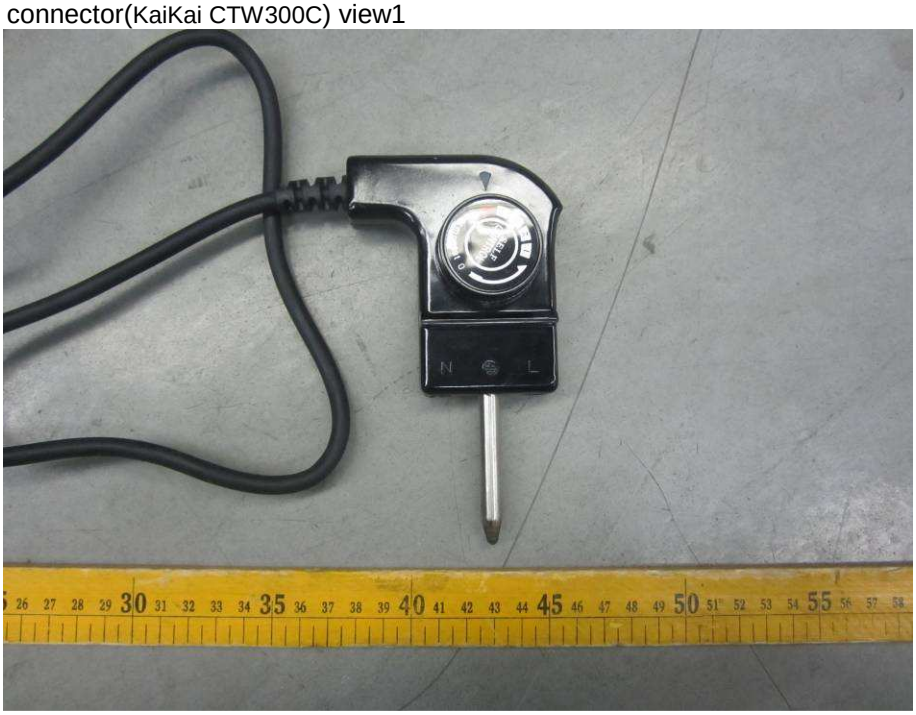
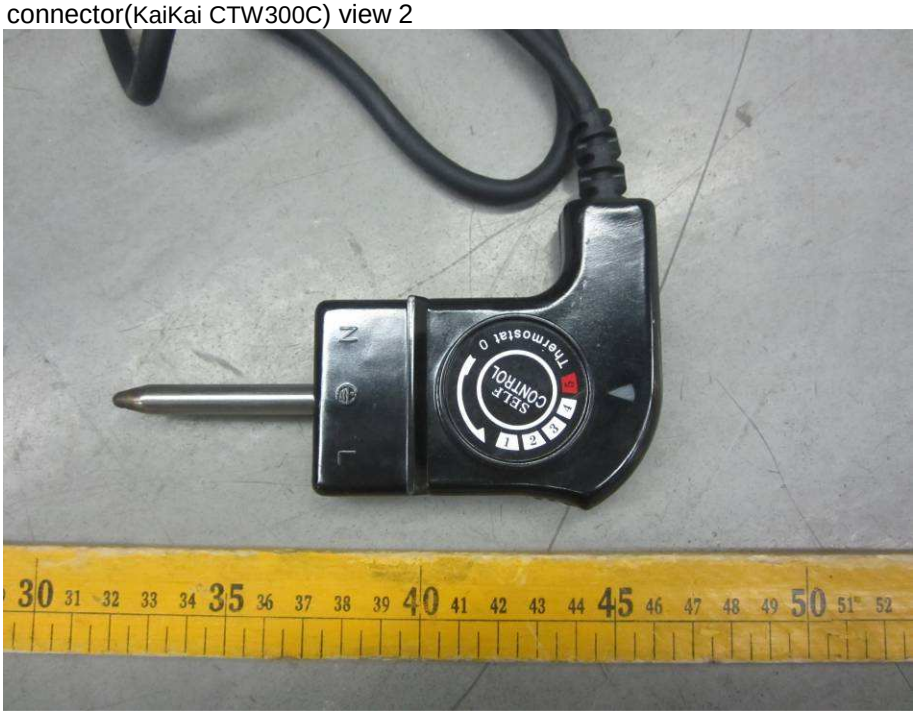


Photo 2.

Description: connector(KaiKai CTW300C) view 2



Appendix – Photographs

Photo 3.

Description: connector(KaiKai CTW300C) view 3

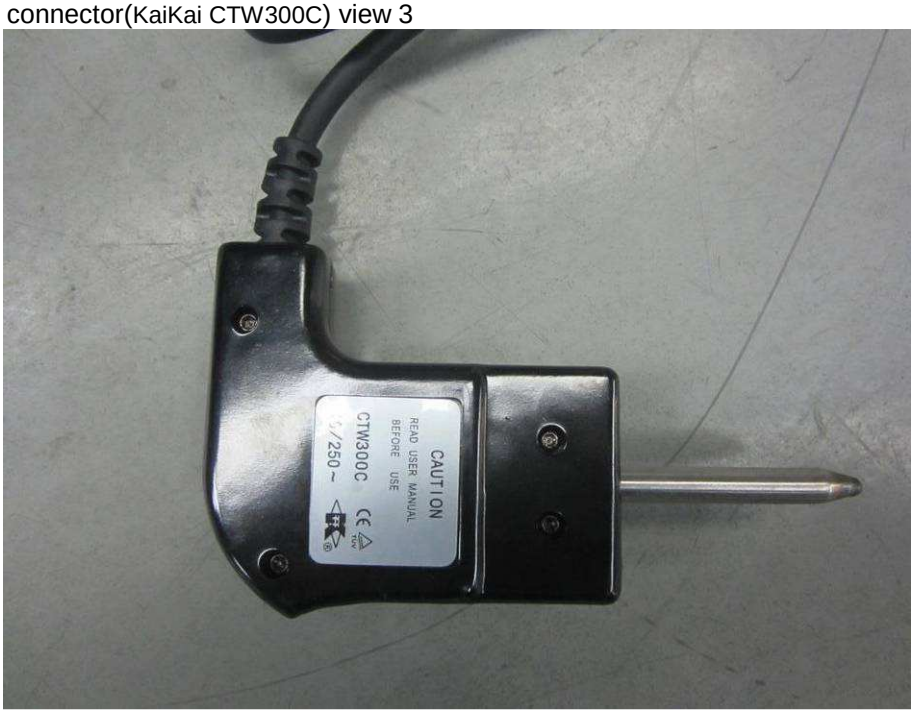
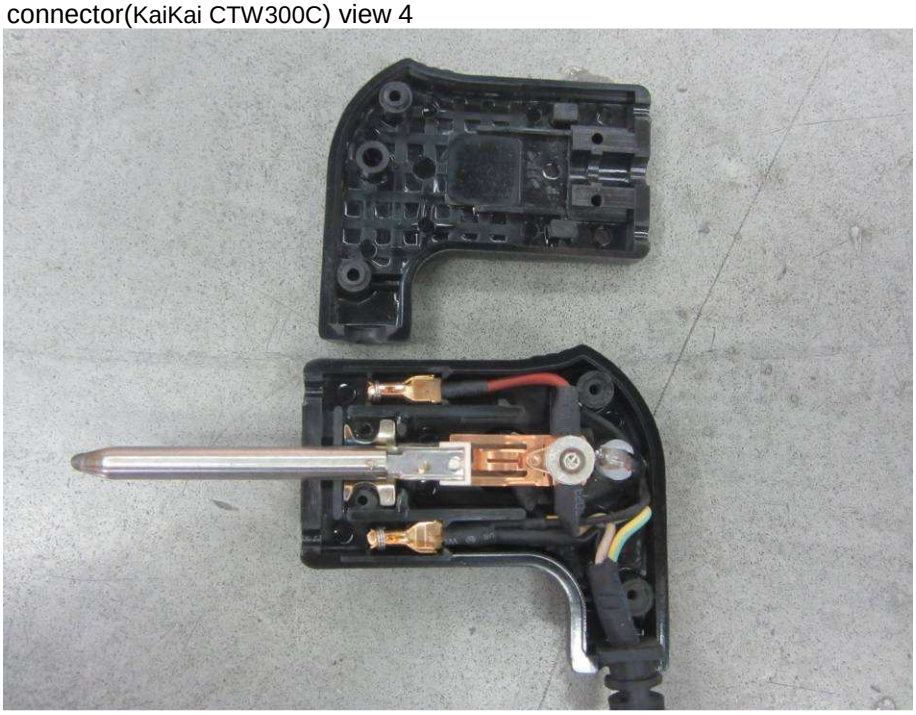


Photo 4.

Description: connector(KaiKai CTW300C) view 4



Appendix – Photographs

Photo 5.

Description: connector(Kaneta CTW-300) view1

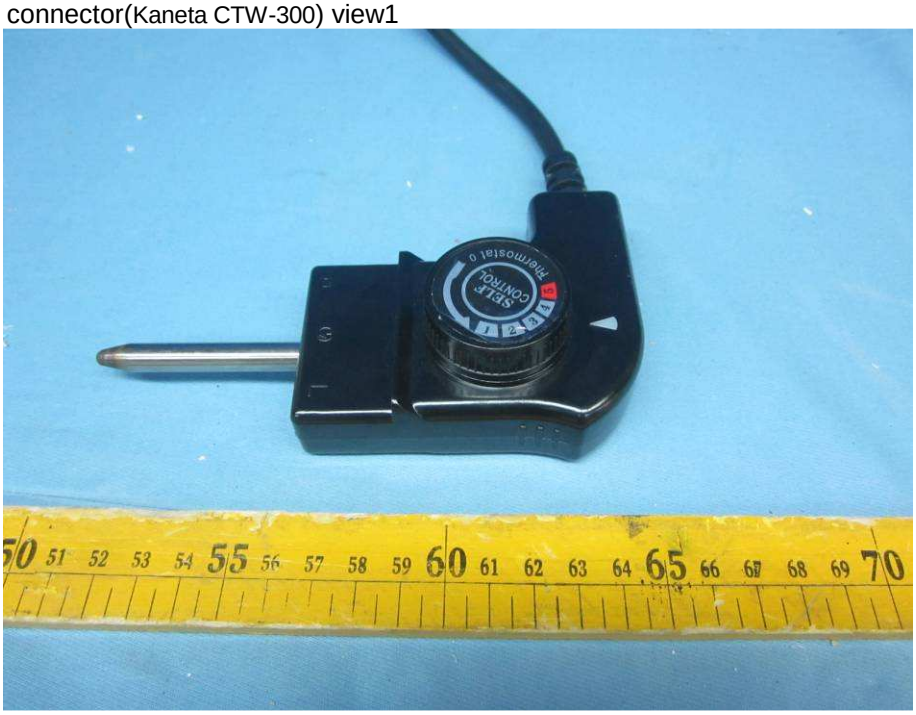
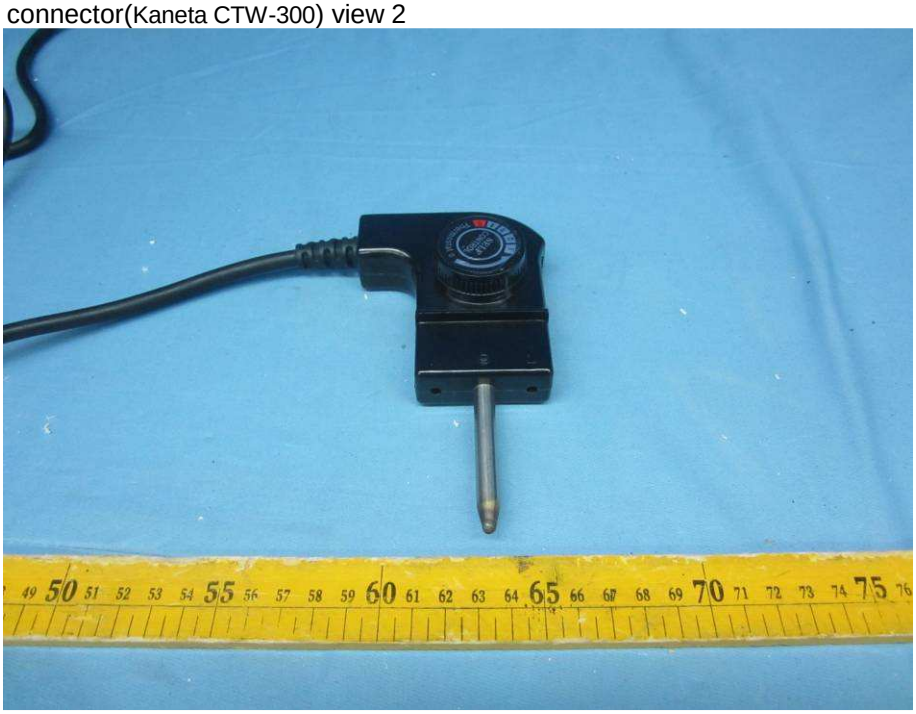


Photo 6.

Description: connector(Kaneta CTW-300) view 2



Appendix – Photographs

Photo 7.

Description: connector(Kaneta CTW-300) view 3

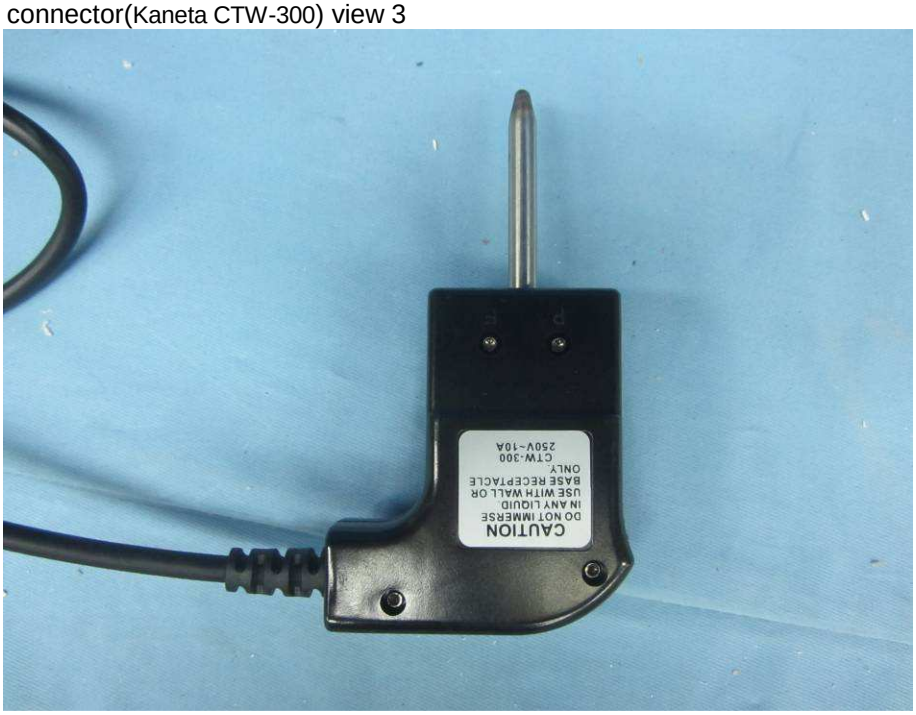


Photo 8.

Description: connector(Kaneta CTW-300) view 4