

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

PAG.1/116

**TEST REPORT N. 1700663AAI**

**TYPE OF TEST:** ELECTROMAGNETIC COMPATIBILITY AND SAFETY TEST

**EQUIPMENT UNDER TEST:** WATER GRIDDLE MODEL: "AQE777"

**JOB No:** MBO17I00779

**D.D.T. No:** N° 160 dated 25/05/2017

**ORDER No:** mail AO del 2017/03/09

**SAMPLE ARRIVAL DATE:** 2017/05/26

**CLIENT:** **Kiwa Cermet Italia S.p.A.**  
Via Treviso, 32/34  
San Vendemiano TV

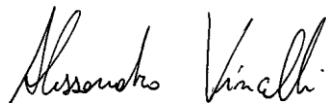
**STATEMENT**

Any data included in this test report exclusively refer to the samples given by the Client.

**The report shall not be reproduced except in full without permission.**

Cadriano di Granarolo, 2017-09-05

Test Engineer  
Alessandro Vincelli



Head of Laboratory  
Nicola Vicentini

**TEST REPORT N. 1700663AAI**

**IDENTIFICATION OF TEST DEVICE**

<b>Sample:</b>	Model: AQE777 Cod.: 1152954
<b>Trade Mark:</b>	Name: Eurotec s.r.l. Div. MBM Address: Strada Brescello – Cadelbosco 33/37/39 City: 42041 Brescello (RE) Italy
<b>Manufacturer</b>	Name: Eurotec s.r.l. Div. MBM Address: Strada Brescello – Cadelbosco 33/37/39 City: 42041 Brescello (RE) Italy
<b>Technical characteristics:</b>	Function: Electric water griddle  Input voltage: 400V (3P + N + PE) Frequency: 50/60Hz Power:12500W IPX4 Dimensions[m]: 0.80x0.71x0.95
<b>Accessories:</b>	N/A
<b>Auxiliary equipments:</b>	N/A
<b>Software:</b>	N/A
<b>Sampling EUT:</b>	Executed by the customer.

**TEST REPORT N. 1700663AAI**

Main components	Model	Features	Reference Standard
Thermal cut-out	Manufacturer: EGO Model: 56.10552.560	Not provided	EN 60730-1 EN 60730-2-9
Thermal switch	Manufacturer: EGO Model: 492105300	Not provided	EN 61058-1
Light	Manufacturer: Slim Model: 6440 TBF/010/SC15	250V	EN 60598-1 EN 60598-2-1
Light	Manufacturer: Slim Model: 6439 TBF/010/SC15	250V	EN 60598-1 EN 60598-2-1
Connectors	Manufacturer: Microelettrica S.r.l. Model: OK435-12FVCN	450V	EN 60998-1 EN 60998-2-1
Thermal regulator	Manufacturer: CAEM Model: TU V ST 50-236-LP6090	Not provided	EN 60730-1 EN60730-2-9
Heating element	Manufacturer: I.R.C.A. S.p.A. Model: 1GIK1D147	230V	/

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

PAG.4/116

TEST REPORT N. 1700663AAI

Port	Name	Type*	Cable length (m)	Cable shielded	Comments
0	Enclosure	N/E	—	—	Metallic
1	Power supply	AC	1.5	NO	H07RN-F 5G2.5mm <sup>2</sup>

\*Note:

AC = AC power port  
DC = DC power port  
N/E = Non-Electrical

TP = Telecommunication Ports  
I/O = Signal Input or Output Port

Device's photo :



Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

TEST REPORT N. 1700663AAI

Device's photo

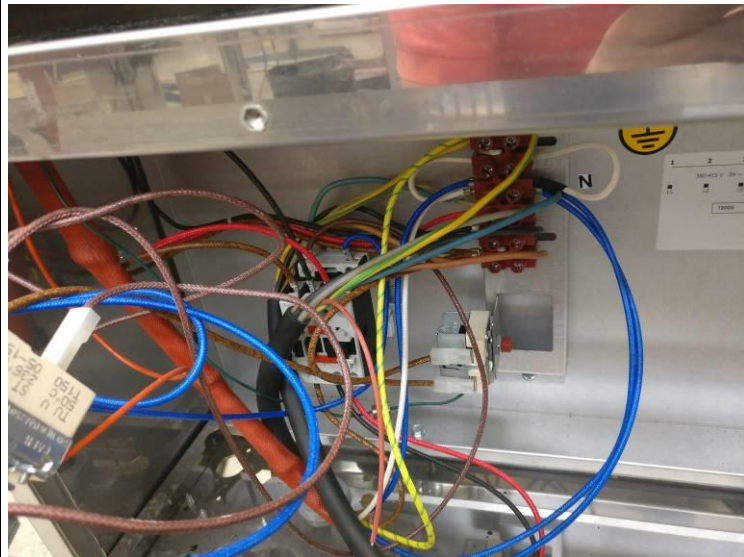


Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadrano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

TEST REPORT N. 1700663AAI

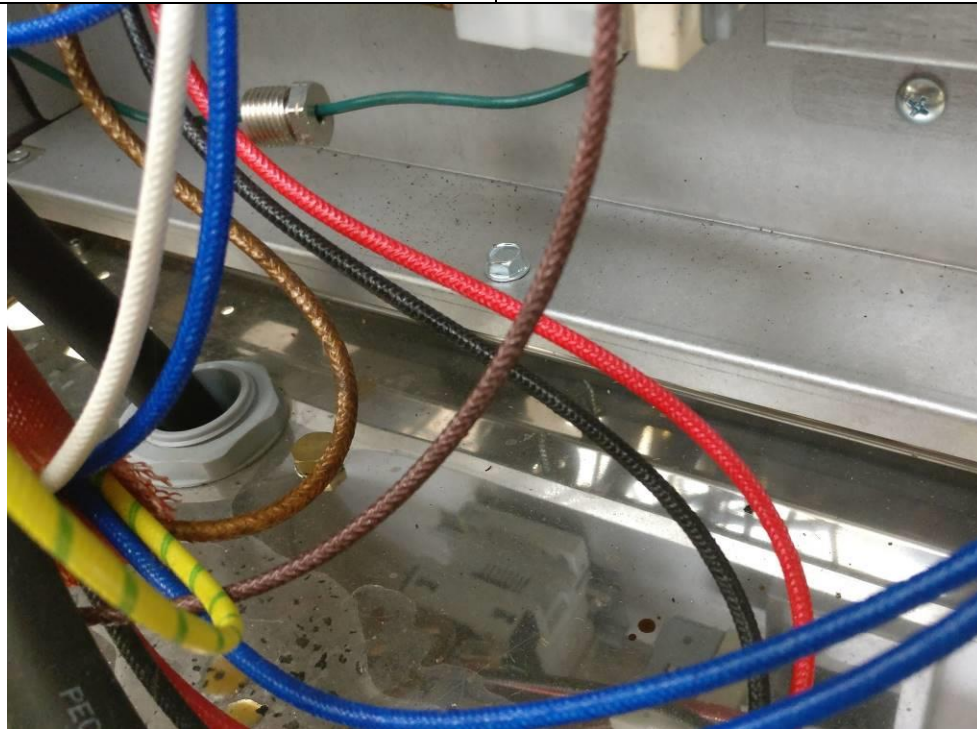
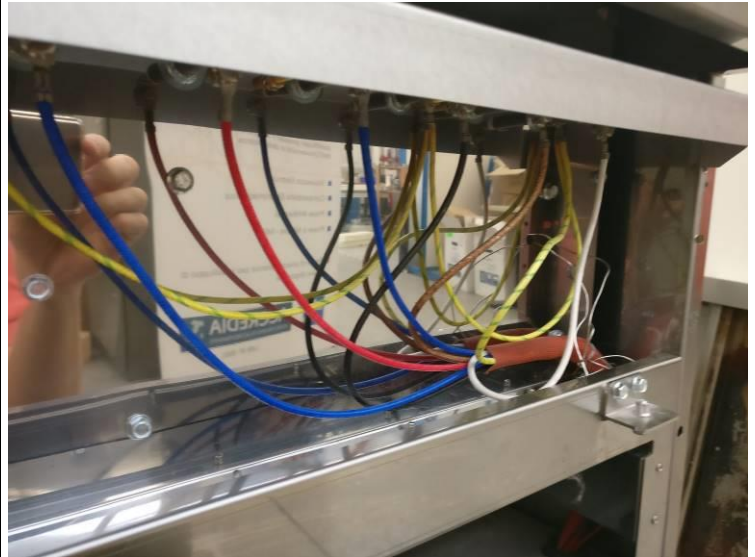
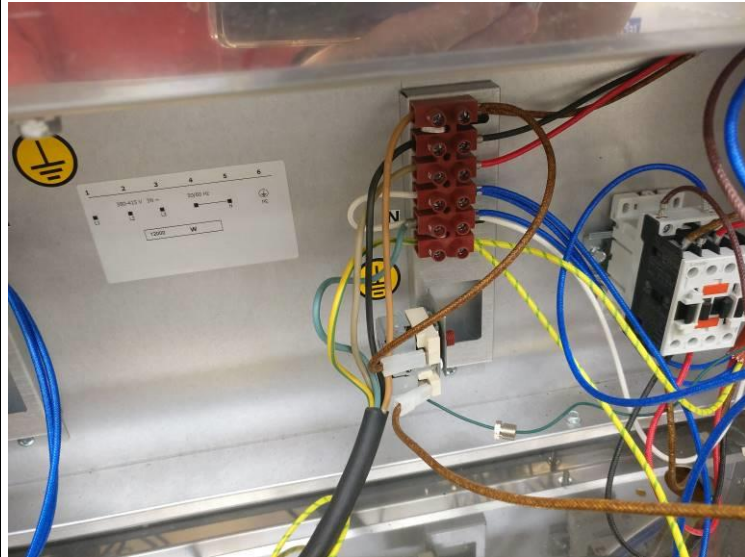
PAG.6/116



Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

PAG.7/116

TEST REPORT N. 1700663AAI



EUT labeling plan





**TEST REPORT N. 1700663AAI**

**TEST METHODS AND SPECIFICATIONS OF REFERENCE**

<b>Standards:</b>	<p>CEI EN 60335-1:2013 /EC:2014 /A11:2015 *</p> <p>- § 27.5</p> <p>CEI EN 60335-2-38:2003 /A1:2008 **</p> <p>CEI EN 55014-1:2008 /A2:2012 **</p> <p>CEI EN 55014-2:1998 /A1:2002 /A2:2009 *</p> <p>- CEI EN 61000-4-2:2011</p> <p>- CEI EN 61000-4-4:2013</p> <p>- CEI EN 61000-4-5:2016</p> <p>- CEI EN 61000-4-6:2011 **</p> <p>- CEI EN 61000-4-11:2006</p> <p>CEI EN 61000-3-2:2015 **</p> <p>CEI EN 61000-3-3:2014 /EC:2016 **</p>
-------------------	---

<b>Summary of testing:</b>	<b>POSITIVE</b>
----------------------------	-----------------

\* Analysis and tests not accredited by ACCREDIA except the following list / point  
 \*\* Analysis and tests not accredited by ACCREDIA

**Performance criteria according to: CEI EN 55014-2**

**Performance criterion A**

The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

**Performance criterion B**

The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

**Performance criterion C**

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use. The following table 14 serves as a guide to formulate the permissible degradation of the equipment under test (EUT) caused by electromagnetic stress. Not all functions of the apparatus need to be tested. The selection, the specification of functions, and the permissible degradation is left to the responsibility of the manufacturer.

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

PAG.10/116

**TEST REPORT N. 1700663AAI**

<b>Date(s) of test performance:</b>	Start:	2017-06-12
	End:	2017-06-16
<b>Testing location:</b>	The tests and measurements were carried out by: <b>Kiwa Cermet Italia S.p.A.</b> Via Cadriano, 23 Cadriano di Granarolo – BO – ITALY  Except for the following tests: - Radiated RF immunity test - Radiated emission test Performed at:  <b>Laboratorio LUCE - Università di Ferrara</b> Via Saragat, 1 44100 FERRARA – ITALIA Under the supervision of <b>Kiwa Cermet Italia</b> personnel.	

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

**TEST OF SAFETY REQUIREMENTS**

<b>TEST</b>	<b>ANALYSIS OF ELECTRICAL SAFETY</b>
<b>REFERENCE STARDARD:</b>	CEI EN 60335-1 CEI EN 60335-2-38
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 25±5°C Humidity: 40±10%

<b>Possible test case verdicts:</b>	
Test case does not apply to the test object:	N/A
Test object does meet the requirement:	P (Pass)
Test object does not meet the requirement:	F (Fail)
Test clause not evaluated:	N/E

**Analysis according to the standard IEC 60335-1 and IEC 60335-2-38**

Clause	Requirement + Test	Result - Remark	Verdict
<b>5</b>	<b>GENERAL CONDITIONS FOR THE TESTS</b>		
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.		<b>P</b>
5.10	Appliances intended for installation in a bank of other appliances or to be fixed to an installation wall enclosed to obtain protection against electric shock and harmful ingress of water equivalent to that obtained when installed in accordance with the instructions provided with the appliance (IEC 60335-2-38)		<b>P</b>
5.101	Appliances are tested as heating appliances, even if they incorporate a motor (IEC 60335-2-38)		<b>P</b>
5.102	Appliances, when assembled in combination with or incorporation other appliances, are tested in accordance with the requirements of this standard. The other appliance are operated simultaneously in accordance with the requirements of the relevant standard (IEC 60335-2-38)		<b>P</b>
5.103	The test conditions and requirements apply to both heated surface of griddles (IEC 60335-2-38)		<b>P</b>
<b>6</b>	<b>CLASSIFICATION</b>		<b>-</b>
6.1	Protection against electric shock: .....	Class I	<b>P</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Appliances of Class I with respect to protection against electric shock (IEC 60335-2-38)		<b>P</b>
6.2	Protection against harmful ingress of water		<b>P</b>
	Appliances normally used on a table are at least IPX3. Other appliances are at least IPX4 (IEC 60335-2-38/A1)	Device declared IPX4	<b>P</b>
<b>7</b>	<b>MARKING AND INSTRUCTIONS</b>		<b>-</b>
7.1	Rated voltage or voltage range (V).....:	400V	<b>P</b>
	Symbol for nature of supply, or.....:	~	<b>P</b>
	Rated frequency (Hz).....:	50/60	<b>P</b>
	Rated power input (W), or.....:	12000	<b>P</b>
	Rated current (A).....:		<b>N/A</b>
	Manufacturer's or responsible vendor's name, trademark or identification mark.....:	MBM	<b>P</b>
	Model or type reference.....:	AQE777	<b>P</b>
	Symbol IEC 60417-5172, for class II appliances		<b>N/A</b>
	IP number, other than IPX0.....:	IPX4	<b>P</b>
	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		<b>N/A</b>
	the appliance is operated by batteries only		<b>N/A</b>
	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		<b>N/A</b>
	Water pressure or range of pressures, in kilopascals (kPa), for appliances intended to be connected to a water supply unless this is indicated in the instruction sheet. (IEC 60335-2-38)		<b>N/A</b>
7.2	Warning for stationary appliances for multiple supply	No multiple supply	<b>N/A</b>
	Warning placed in vicinity of terminal cover		<b>N/A</b>
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		<b>N/A</b>
	Different rated values marked with the values separated by an oblique stroke		<b>N/A</b>
7.4	Appliances adjustable for different rated voltages or rated frequencies, the voltage or the frequency setting is clearly discernible		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Requirement met if frequent changes are not required and the rated voltage or rated frequency to which the appliance is to be adjusted is determined from a wiring diagram		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A
	the power input is related to the arithmetic mean value of the rated voltage range		N/A
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		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		N/A
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N/A
	correct mode of connection is obvious		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		-
	- marking of terminals exclusively for the neutral conductor (letter N)	A scheme of connection provided	P
	- marking of protective earthing terminals (symbol IEC 60417-5019)	A scheme of connection provided	P
	- marking of functional earthing terminals (symbol IEC 60417-5018)		N/A
	- 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 .....	°C is present	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		N/A
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N/A
7.11	Indication for direction of adjustment of controls		P

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	The instructions state that:		-
	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
	For appliances for altitudes exceeding 2000 m, the maximum altitude is stated .....		N/A
	The instructions for appliances incorporating a functional earth states that the appliance incorporates an earth connection for functional purposes only		N/A
	Appliance incorporate a surface of glass-ceramic material that provides the enclosure of live parts, the instructions shall include the substance of the following: WARNING: If Surface is cracked, immediately disconnect the appliance or appropriate part of the appliance from the supply. (IEC 60335-2-38)		N/A
	Instructions for appliances with cooking surface of glass ceramic or similar material shall state that aluminium foil and plastic vessels are not be placed on the hot surfaces.		N/A
	They shall also state that these surfaces are not to be used for storage (IEC 60335-2-38)		N/A
	The instructions for appliance incorporating halogen lamps shall warn the user not to avoid looking directly at the lamps when on (IEC 60335-2-38)		N/A
	If symbol 5021 of IEC 60417 used, meaning being explained. (IEC 60335-2-38)		P
7.12.1	Sufficient details for installation supplied		P
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		N/A
	If different rated voltages or different rated frequencies are marked, the instructions state what action to be taken to adjust the appliance		N/A
	Appliance accompanied by an instruction sheet detailing any special precautions necessary for installation.(IEC 60335-2-38)		P

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Details of how to ensure appropriate protection against electric shock and harmful ingress of water for appliances intended for installation in a bank of other appliances or to be fixed to an installation wall (IEC 60335-2-38)		<b>P</b>
	Detailed installation instructions, if the controls of more than one appliance are combined in a separate enclosure (IEC 60335-2-38)		<b>N/A</b>
	Instructions for user maintenance, for example cleaning.		<b>P</b>
	Instructions state that such on appliance shall not be cleaned with a water jet. (IEC 60335-2-38)		<b>P</b>
	Appliance that are provided with an appliance inlet, and are intended to be immersed in water for cleaning shall be accompanied by an instruction stating that the connector shall be removed before the appliance is cleaned and that the appliance inlet shall be dried before the appliance is used again (IEC 60335-2-38)		<b>N/A</b>
	The instruction of appliances other than stationary appliances and appliances with detachable electrical parts, that are intended to be partially or completely immersed in water for cleaning, shall state that the appliance or part not be immersed (IEC 60335-2-38)		<b>N/A</b>
	Recommendations regarding the rating and installation of protective devices for appliances which are permanently connected to a fixed wiring and for which leakage currents may exceed 10 mA (IEC 60335-2-38)		<b>N/A</b>
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		<b>P</b>
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected		<b>N/A</b>
7.12.4	Instructions for built-in appliances:		<b>-</b>
	- dimensions of space	No built-in appliance	<b>N/A</b>
	- dimensions and position of supporting and fixing	No built-in appliance	<b>N/A</b>
	- minimum distances between parts and surrounding structure	No built-in appliance	<b>N/A</b>
	- minimum dimensions of ventilating openings and arrangement	No built-in appliance	<b>N/A</b>
	- connection to supply mains and interconnection of separate components	No built-in appliance	<b>N/A</b>

TEST REPORT N. 1700663AAI

Clause	Requirement + Test	Result - Remark	Verdict
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless	No built-in appliance	N/A
	a switch complying with 24.3	No built-in appliance	N/A
	separate control panels of built-in appliance (IEC 60335-2-38)	No built-in appliance	N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		-
	- max. inlet water pressure (Pa).....:	No connection to the water mains foreseen	N/A
	- min. inlet water pressure, if necessary (Pa)..... ..... .....:	No connection to the water mains foreseen	N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets	No connection to the water mains foreseen	N/A
7.13	Instructions and other texts in an official language	Manual provided and evaluated in Italian	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		P
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		P



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	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		<b>P</b>
	The symbol IEC 60417-5018 placed next to the symbol IEC 60417-5172 or IEC 60417-5180		<b>N/A</b>
	When it is not practical to place the marking of fixed appliances so that it is visible after the appliance has been installed, relevant information included - in the instruction for use or (IEC 60335-2-38)		<b>P</b>
	- Additional label (IEC 60335-2-38)		<b>N/A</b>
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		<b>N/A</b>
7.101	If during the test of Clause 11, temperature rise of walls of test corner above the level of cooking surface exceeds 65K and or if during the test of Clause 19, temperature rise of the walls of test corner exceeds 125K The installation instructions shall include the substance of the following that shall also be included on a non-permanent label, for example a tie-on type, attached to the appliance (IEC 60335-2-38)		<b>N/A</b>
	-Where this appliance is to be positioned in close proximity to a wall, partitions, kitchen furniture, decorative finishes, etc. it is recommended that they be made of non-combustible material; If not, they shall be clad with suitable non-combustible heat-insulating material, and the closes attention be paid to fire prevention regulations.		<b>N/A</b>
7.102	Equipotential bonding terminals indicated by the equipotential symbol (IEC 60335-2-38)		<b>P</b>
	These marking shall not be placed on screws, removable washer or other parts that can be removed when conductors are being connected (IEC 60335-2-38))		<b>P</b>
7.103	Appliances or detachable electrical parts of appliances intended to be partially immersed in water for cleaning shall be market with a line and the warning ( Do not immerse beyond this line )the maximum depth of immersion (IEC 60335-2-38)		<b>N/A</b>
	If there is any seam or seal that causes the appliance or part not to withstand the treatment specified in 15.102, the line indicating the maximum depth of immersion shall be at least 50 mm below any such seam or seal when the appliance or the part is in the position which is to be cleaned. (IEC 60335-2-38)		<b>N/A</b>
<b>8</b>	<b>PROTECTION AGAINST ACCESS TO LIVE PARTS</b>		<b>-</b>
8.1	Adequate protection against accidental contact with live parts		<b>P</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
8.1.1	Requirement applies for all positions, detachable parts removed		<b>P</b>
	Lamps behind a detachable cover not removed, if conditions met		<b>N/A</b>
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		<b>N/A</b>
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		<b>P</b>
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		<b>N/A</b>
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		<b>N/A</b>
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements		<b>N/A</b>
8.1.4	Accessible part not considered live if:		<b>-</b>
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V		<b>N/A</b>
	- safety extra-low d.c. voltage: not exceeding 42.4 V		<b>N/A</b>
	- or separated from live parts by protective impedance		<b>N/A</b>
	If protective impedance: d.c. current not exceeding 2 mA, and		<b>N/A</b>
	a.c. peak value not exceeding 0.7 mA		<b>N/A</b>
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 $\mu$ F		<b>N/A</b>
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 $\mu$ C		<b>N/A</b>
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		<b>N/A</b>
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		<b>-</b>
	- built-in appliances		<b>N/A</b>
	- fixed appliances		<b>N/A</b>
	- appliances delivered in separate units		<b>N/A</b>
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		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Only possible to touch parts separated from live parts by double or reinforced insulation		N/A
<b>9</b>	<b>STARTING OF MOTOR-OPERATED APPLIANCES</b>		-
9.101	Fan motors providing a cooling effect in order to comply with the requirements of Cl. 11 start under all voltage conditions which may occur in use (IEC 60335-2-38)		N/A
	Starting test three times at 0,85 times rated voltage (IEC 60335-2-38)		N/A
	Starting tests three times at 1,06 times rated voltage (except for motors with centrifugal starting switch) (IEC 60335-2-38)		N/A
	In all cases, the safety is not affected and overload protection devices does not operate (IEC 60335-2-38)		N/A
<b>10</b>	<b>POWER INPUT AND CURRENT</b>		-
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		N/A
	For appliances having more than one heating unit, the total power input may be determined by measuring the power input of each heating unit separately(IEC 60335-2-38)		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2.....:		N/A
	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the current is the arithmetic mean value		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated current is related to the arithmetic mean value of the range		N/A
<b>11</b>	<b>HEATING</b>		-

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
11.1	No excessive temperatures in normal use		<b>P</b>
11.2	The appliance is held, placed or fixed in position as described .....		<b>P</b>
	Appliances intended to be fixed on the floor, and appliances with a mass > 40 kg and not provided with rollers, castors or similar means are installed in accordance with the manufacturer's instructions (IEC 60335-2-38)		<b>P</b>
	If no instructions are given, these appliances are considered as appliances normally placed on the floor (IEC 60335-2-38)		<b>N/A</b>
11.3	Temperature rises, other than of windings, determined by thermocouples		<b>P</b>
	Temperature rises of windings determined by resistance method, unless		<b>N/A</b>
	the windings are non-uniform or it is difficult to make the necessary connections		<b>N/A</b>
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) .....		<b>P</b>
	If it is not possible to switch on all heating elements sources at the same time, the test is made with each of the combinations that the switch arrangement will allow, the highest load possible with each switching arrangement being in circuit (IEC 60335-2-38)		<b>N/A</b>
	If the appliance is provided with a control which limits the total power input, the test is made with whichever combination of heating units, as may be selected by the control, imposes the severest condition (IEC 60335-2-38)		<b>N/A</b>
	If the temperature rise limits of motors, transformers or electronic circuits are exceeded, the test is repeated with 1,06 times rated voltage (only for measurements of motor, transformer and electronic circuit)(IEC 60335-2-38)		<b>N/A</b>
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V).....		<b>N/A</b>
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V) .....		<b>N/A</b>
11.7	The appliances are operated until steady conditions are established. (IEC 60335-2-38)		<b>P</b>
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 .....	(see appended table)	<b>P</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	Protective devices do not operate, except		N/A
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
	Temperature rise in test corner exceeds the limit of 65K, requirement of clause 7.101 (IEC 60335-2-38)		N/A
<b>13</b>	<b>LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE</b>		-
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times the rated power input (W) .....		P
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V).....:		N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
13.2	For class 0, class II and class III appliances, and class II constructions, leakage current measured by means of the circuit described in figure 4 of IEC 60990		N/A
	For class 0I and class I appliances, a low impedance ammeter may be used		P
	Leakage current measurements .....	(see appended table)	P
	Instead of the permissible leakage current to stationary Class I appliances, the following applies: (IEC 60335-2-38)		-
	- cord and plug connected appliances: 1 mA/kW rated power input of the appliance (max. of 10 mA) (IEC 60335-2-38)		N/A
	- other appliances: 1 mA/kW rated power input of the appliance (without max.) (IEC 60335-2-38)		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
	If there is earthed metal between live parts and surface of glass-ceramic or similar material, the flat metal plate is connected to earthed metal (IEC 60335-2-38)		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	1 000V applied between live parts and metal plate (IEC 60335-2-38)		<b>P</b>
	If there is no earthed metal between live parts and surface of glass-ceramic or similar material, the metal plate is connected to earthed metal (IEC 60335-2-38)		<b>N/A</b>
	3 000V applied between live parts and metal plate (IEC 60335-2-38)		<b>N/A</b>
<b>14</b>	<b>TRANSIENT OVERVOLTAGES</b>		<b>-</b>
	Appliances withstand the transient over-voltages to which they may be subjected		<b>N/A</b>
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6.....:	(see appended table)	<b>N/A</b>
	No flashover during the test, unless		<b>N/A</b>
	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited		<b>N/A</b>
<b>15</b>	<b>MOISTURE RESISTANCE</b>		<b>-</b>
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance		<b>P</b>
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		<b>P</b>
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		<b>P</b>
	Appliances or parts to be immersed in water for cleaning, subjected to the tests of 15.102 (IEC 60335-2-38)		<b>N/A</b>
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529 .....	IPX5 Declaration provided by the manufacturer	<b>P</b>
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		<b>N/A</b>
	Additional 5 min of splash test for IPX0, IPX1, 1PX2, IPX3 and IPX4 appliances (IEC 60335-2-38):		<b>P</b>
	Bowl placed on the floor for appliances normally placed on the floor (IEC 60335-2-38)		<b>P</b>
	For other appliance the bowl placed on a horizontal support 50mm below the lowest edge of the appliance (IEC 60335-2-38)		<b>N/A</b>
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		P
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		P
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		N/A
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		P
	Appliances normally used on a table are placed on a support having dimensions which are 15 cm ± 5 cm in excess of those of the orthogonal projection of the appliance on the support (IEC 60335-2-38)		N/A
15.2	Spillage of liquid does not affect the electrical insulation		P
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts are removed		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	A litre of cold water containing approximately 1 % NaCl is poured steadily over a period of 1 min on the centre of the surface of the griddle plate (IEC 60335-2-38)		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
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		P
	Reassembly of those parts that may have been removed		N/A
	The appliance withstands the tests of clause 16		P
15.101	Appliances provided with a tap intended for filling or cleaning, the water from the tap cannot come into contact with live parts (IEC 60335-2-38)		N/A
15.102	Appliances or detachable electrical parts intended to be partially or completely immersed in water for cleaning have adequate protections against the effects of immersion. (IEC 60335-2-38)		N/A
<b>16</b>	<b>LEAKAGE CURRENT AND ELECTRIC STRENGTH</b>		-
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) .....		N/A
	Three-phase appliances: test voltage 1.06 times rated voltage divided by $\sqrt{3}$ (V) .....	(see appended table)	P
	Leakage current measurements instead of the permissible leakage current of stationary class I appliances, the following applies: (IEC 60335-2-38)		-
	- cord and plug connected appliances: 1 mA/kW rated power input of the appliance (max. 10 mA) (IEC 60335-2-38)		N/A
	- other appliances: 1 mA/kW rated power input of the appliance (without max.) (IEC 60335-2-38)	(see appended table)	P



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	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
	Leakage current measurement if there is earthed metal between live parts and surface of glass-ceramic or similar material (IEC 60335-2-38)	(see appended table)	N/A
	Leakage current measurement if there is no earthed metal between live parts and surface of glass-ceramic or similar material (IEC 60335-2-38)	(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
	Test voltage of 1250V between live parts and metal plate if there is earthed metal between live parts and surface of glass-ceramic or similar material (IEC 60335-2-38)		P
	Test voltage of 3 000V between live parts and metal plate if there is no earthed metal between live parts and surface of glass-ceramic or similar material (IEC 60335-2-38)		N/A
	No breakdown during the tests		P
<b>17</b>	<b>OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS</b>		-
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use .....	(see appended table)	N/A
	Appliance supplied with 1.06 or 0.94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V).....:		N/A
	Basic insulation is not short-circuited		N/A
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		N/A
	Temperature of the winding not exceeding the value specified in table 8		N/A
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
<b>18</b>	<b>ENDURANCE</b>		
18.101	Appliances incorporating surfaces of glass-ceramic or similar material withstand thermal stresses liable to occur in normal use (IEC 60335-2-38)		<b>N/A</b>
	After the test the surface is not cracked and the appliance withstands the tests in 16. (IEC 60335-2-38)		<b>N/A</b>
<b>19</b>	<b>ABNORMAL OPERATION</b>		-
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		<b>P</b>
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe .....	(see appended table)	<b>N/A</b>
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		<b>P</b>
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		<b>P</b>
	if applicable, to the test of 19.5		<b>N/A</b>
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		<b>N/A</b>
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		<b>N/A</b>
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		<b>N/A</b>
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		<b>P</b>
	Appliances incorporating voltage selector switches subjected to the test of 19.15		<b>N/A</b>
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		<b>P</b>
	until steady conditions are established		<b>N/A</b>
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		<b>N/A</b>
	A control or switching device that is intended for different settings corresponding to different functions of the same part of the appliance and that are covered by different standards is, in addition, set in the most severe setting, irrespective of the manufacturer's instructions. (IEC 60335-2-38)		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
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).....:		<b>P</b>
	Controls are set at maximum (IEC 60335-2-38)		<b>P</b>
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W) .....		<b>P</b>
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		<b>P</b>
	The main contacts of the contactor intended for switching on and off the heating elements in normal use are locked in "ON" position. However, if two contactors operate independently of each other or if one contactor operates two independent sets of main contacts, these contacts are locked in "ON" position in turn (IEC 60335-2-38)		<b>P</b>
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		<b>N/A</b>
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		<b>N/A</b>
	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		<b>N/A</b>
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		<b>N/A</b>
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures (V).....:		<b>N/A</b>
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or		<b>N/A</b>
	locking moving parts of other appliances		<b>N/A</b>
	Locked rotor, capacitors open-circuited one at a time		<b>N/A</b>
	Test repeated with capacitors short-circuited one at a time, unless		<b>N/A</b>
	capacitor is of class P2 of IEC 60252-1		<b>N/A</b>
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed .....		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	An electronic timer or programmer that operates to ensure compliance with the test before the maximum period under the conditions of Clause 11 is reached, is a protective electronic circuit		N/A
	Other appliances supplied with rated voltage for a period as specified.....:		N/A
	Winding temperatures not exceeding values specified in table 8 .....		N/A
19.8	Multi-phase motors operated at rated voltage with one phase disconnected		N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N/A
	Motor-operated and combined appliances for which 30.2.3 is applicable and that use overload protective devices relying on electronic circuits to protect the motor windings, are also subjected to the test		N/A
	Winding temperatures not exceeding values as specified:		N/A
19.10	Series motor operated at 1.3 times rated voltage for 1 min (V) .....		N/A
	During the test, parts not being ejected from the appliance		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless		N/A
	they comply with the conditions specified in 19.11.1		N/A
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		N/A
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N/A
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		N/A
	During and after each test the following is checked:		-
	- the temperature of the windings do not exceed the values specified in table 8		N/A

**TEST REPORT N. 1700663AAI**

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
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		-
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified		N/A
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit		N/A
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		-
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N/A
	b) open circuit at the terminals of any component		N/A
	c) short circuit of capacitors, unless		N/A
	they comply with IEC 60384-14		N/A
	d) short circuit of any two terminals of an electronic component, other than integrated circuits		N/A
	This fault condition is not applied between the two circuits of an optocoupler		N/A
	e) failure of triacs in the diode mode		N/A
	f) failure of microprocessors and integrated circuits		N/A
	g) failure of an electronic power switching device		N/A
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to g) of 19.11.2		N/A
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		N/A
	a device that can be placed in the stand-by mode,		N/A
	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode		N/A
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, the tests being carried out after the protective electronic circuit has operated, except that		N/A
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		N/A
	Surge protective devices disconnected, unless		N/A
	They incorporate spark gaps		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		N/A
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		N/A
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		N/A
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		N/A
	An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode		N/A
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling		N/A
	Earthed heating elements in class I appliances disconnected		N/A
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		N/A
19.11.4.6	Appliances having a rated current not exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-11		N/A

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Appliances having a rated current exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-34		N/A
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		N/A
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate		N/A
	The appliance continues to operate normally, or		N/A
	requires a manual operation to restart		N/A
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A) .....		N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9 .....	(see appended table)	P
	If the temperature rise of the walls above and below the cooking surface level or of the floor or ceiling exceeds 125K, the requirements of 7.101 apply (IEC 60335-2-38)		N/A
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		-
	- basic insulation (V).....:		P
	- supplementary insulation (V) .....		N/A
	- reinforced insulation (V) .....		N/A
	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

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		-
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		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
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited		P
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time		P
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		N/A
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		N/A
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied		N/A
<b>20</b>	<b>STABILITY AND MECHANICAL HAZARDS</b>		-
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
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		N/A
	Protective enclosures, guards and similar parts are non-detachable, and		N/A
	have adequate mechanical strength		N/A
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, by unexpected reclosure		N/A
	Not possible to touch dangerous moving parts with the test probe described		N/A
<b>21</b>	<b>MECHANICAL STRENGTH</b>		-
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
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		N/A
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		N/A
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
21.101	Cooking surfaces of glass-ceramic and similar materials shall withstand the stresses liable to occur (IEC 60335-2-38)		N/A
<b>22</b>	<b>CONSTRUCTION</b>		-
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		-
	- a supply cord fitted with a plug, or		N/A
	- a switch complying with 24.3, or		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		P
	- an appliance inlet		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Single-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Pull force of 50N to each pin after the appliance has been placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating, unless		N/A
	rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance equal to or greater than 0,1µF, the appliance being disconnected from the supply at the instant of voltage peak		N/A
	Voltage not exceeding 34 V (V).....:		N/A
	If compliance relies on the operation of an electronic circuit, the electromagnetic phenomena tests of 19.11.4.3 and 19.11.4.4 are applied		N/A
	The discharge test is then repeated three times, voltage not exceeding 34 V (V).....:		N/A
22.6	Electrical insulation not affected by condensing water or leaking liquid		N/A
	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks		N/A
	In case of doubt, test as described		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		P

TEST REPORT N. 1700663AAI

Clause	Requirement + Test	Result - Remark	Verdict
	the substance has adequate insulating properties		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N/A
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		N/A
	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		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		P
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N/A
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		N/A
	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		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported		N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N/A
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		N/A
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		N/A
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		N/A
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		N/A
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		N/A
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		N/A
	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
	Ceramic and similar porous material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
22.33	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		N/A
	unearthed metal parts separated from live parts by basic insulation only		N/A
	Electrodes not used for heating liquids		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		N/A
	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 and cordless 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		P
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N/A
	they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	the capacitors comply with 22.42		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
22.38	Capacitors not connected between the contacts of a thermal cut-out		<b>P</b>
22.39	Lamp holders used only for the connection of lamps		<b>N/A</b>
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		<b>N/A</b>
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		<b>N/A</b>
22.41	No components, other than lamps, containing mercury		<b>P</b>
22.42	Protective impedance consisting of at least two separate components		<b>N/A</b>
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		<b>N/A</b>
	Resistors checked by the test of 14.1 a) in IEC 60065		<b>N/A</b>
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		<b>N/A</b>
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		<b>N/A</b>
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		<b>P</b>
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		<b>N/A</b>
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		<b>N/A</b>
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		<b>N/A</b>
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		<b>N/A</b>
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		<b>N/A</b>
	No leakage from any part, including any inlet water hose		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		-
	- continuously, or		N/A
	- automatically, or		N/A
	- remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts have at least double insulation or reinforced insulation between live parts and the functionally earthed parts		N/A
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N/A
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N/A



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
22.101	For three-phase appliances, thermal cut-outs protecting circuits with heating elements, and those for motors of which the unexpected starting may cause a hazard, are of the non-self-resetting and trip-free type, and provide all-pole disconnection from related supply circuits. (IEC 60335-2-38/A1)		<b>P</b>
	For single-phase appliances and for single-phase heating elements and/or motors connected between one phase and neutral or between phase and phase, thermal cut-outs protecting circuits with heating elements, and those for motors of which the unexpected starting may cause a hazard, shall be of the non-self-resetting and trip-free type, and shall provide at least one-pole disconnection. (IEC 60335-2-38/A1)		<b>N/A</b>
	If the non-self-resetting thermal cut-out is only accessible after removing parts with the aid of a tool, the trip-free type is not required (IEC 60335-2-38/A1)		<b>N/A</b>
22.102	Lights, switches and push-buttons only coloured red for the indication of danger, alarm or similar situations (IEC 60335-2-38)		<b>P</b>
22.103	Portable appliances do not have openings on the underside that allow small items to penetrate and touch live parts (IEC 60335-2-38)		<b>N/A</b>
22.104	Hinged cooking surfaces of griddle grills are protected against accidental dropping (IEC 60335-2-38)		<b>N/A</b>
<b>23</b>	<b>INTERNAL WIRING</b>		<b>-</b>
23.1	Wireways smooth and free from sharp edges		<b>P</b>
	Wires protected against contact with burrs, cooling fins etc.		<b>P</b>
	Wire holes in metal well-rounded or provided with bushings		<b>P</b>
	Wiring effectively prevented from coming into contact with moving parts		<b>P</b>
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges		<b>N/A</b>
	Beads inside flexible metal conduits contained within an insulating sleeve		<b>N/A</b>
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		<b>N/A</b>
	Flexible metallic tubes not causing damage to insulation of conductors		<b>N/A</b>
	Open-coil springs not used		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use, or		N/A
	100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		N/A
	Not more than 10% of the strands of any conductor broken, and		N/A
	not more than 30% for wiring supplying circuits that consume no more than 15W		N/A
	When the capillary tube is liable to flexing in normal use the following applies: (IEC 60335-2-38)		-
	- where the capillary tube is fitted as part of the internal wiring, Part 1 applies (IEC 60335-2-38)		N/A
	- where the capillary tube is separate, it is subjected to 1000 flexings at a rate not exceeding 30 per minute (IEC 60335-2-38)		N/A
	- after the test: no sign of damage and no damage impairing its further use (IEC 60335-2-38)		N/A
	However, if a rupture of the capillary tube renders the appliance inoperative (fail-save), separate capillary tube are not tested, and those fitted as part of the internal wiring are not inspected for compliance with the requirements (IEC 60335-2-38)		N/A
	Compliance in this instance is checked by rupturing the capillary tube (IEC 60335-2-38)		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use		P
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		N/A
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
	For class II construction, the requirements for supplementary insulation and reinforced insulation apply,		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	except that the sheath of a cord complying with IEC 60227 or IEC 60245 may provide supplementary insulation.		N/A
	A single layer of internal wiring insulation does not provide reinforced insulation		N/A
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by clamping at both ends, or		N/A
	be such that it can only be removed by breaking or cutting		N/A
23.7	The colour combination green/yellow only used for earthing conductors		P
23.8	Aluminium wires not used for internal wiring		P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
<b>24</b>	<b>COMPONENTS</b>		-
24.1	Components comply with safety requirements in relevant IEC standards	This requirement is substituted by the version of the EN 60335-1	N/A
	List of components .....	This requirement is substituted by the version of the EN 60335-1	N/A
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance	This requirement is substituted by the version of the EN 60335-1	N/A
	Relays tested as part of the appliance, or	This requirement is substituted by the version of the EN 60335-1	N/A
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1	This requirement is substituted by the version of the EN 60335-1	N/A
	The requirements of Clause 29 apply between live parts of components and accessible parts of the appliance	This requirement is substituted by the version of the EN 60335-1	N/A
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard	This requirement is substituted by the version of the EN 60335-1	N/A
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections	This requirement is substituted by the version of the EN 60335-1	N/A
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2	This requirement is substituted by the version of the EN 60335-1	N/A

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

PAG.44/116

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Components that have been previously tested to comply with the resistance to fire requirements in the IEC standard for the relevant component need not be retested provided the specified conditions are met	This requirement is substituted by the version of the EN 60335-1	N/A
	If these conditions are not satisfied, the component is tested as part of the appliance.	This requirement is substituted by the version of the EN 60335-1	N/A
	Power electronic converter circuits not required to comply with IEC 62477-1, they are tested as part of the appliance	This requirement is substituted by the version of the EN 60335-1	N/A
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9	This requirement is substituted by the version of the EN 60335-1	N/A
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9	This requirement is substituted by the version of the EN 60335-1	N/A
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance	This requirement is substituted by the version of the EN 60335-1	N/A
	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	This requirement is substituted by the version of the EN 60335-1	N/A
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309	This requirement is substituted by the version of the EN 60335-1	N/A
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14		N/A
	If the capacitors have to be tested, they are tested according to Annex F		N/A
24.1.2	Transformers in associated switch mode power supplies comply with Annex BB of IEC 61558-2-16		N/A
	Safety isolating transformers complying with IEC 61558-2-6		N/A
	If they have to be tested, they are tested according to Annex G		N/A
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	If they have to be tested, they are tested according to Annex H		N/A
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	If the switch only operates a motor starting relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N/A
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		P
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		N/A
	- voltage maintained non-self-resetting thermal cut-outs: 1 000		N/A
	- other non-self-resetting thermal cut-outs: 30		P
	- 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		P
	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
	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9		P
24.1.5	Appliance couplers complying with IEC 60320-1		N/A
	However, for class II appliances classified higher than IPX0, the appliance couplers comply with IEC 60320-2-3		N/A
	Interconnection couplers complying with IEC 60320-2-2		N/A
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N/A
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
24.1.8	The relevant standard for thermal links is IEC 60691		N/A
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		N/A
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance .....		N/A
24.2	Appliances not fitted with:		-
	- switches or automatic controls in flexible cords		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 the solder has a melting point of at least 230 °C		P
			N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		N/A
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N/A
	In addition, the motors comply with the requirements of Annex I		N/A
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		N/A
	One or more of the following conditions are to be met:		-
	- the capacitors are of class P2 according to IEC 60252-1		N/A
	- the capacitors are housed within a metallic or ceramic enclosure		N/A
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N/A
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E		N/A
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N/A
24.101	Connectors fitted to appliances shall not incorporate a thermostat ( IEC 60335-2-38)		N/A
<b>25</b>	<b>SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS</b>		-
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		-
	- supply cord fitted with a plug,		N/A
	- supply cord fitted with a plug, the current rating and voltage rating of the plug being not less than the corresponding ratings of its associated appliance		N/A
	- pins for insertion into socket-outlets		N/A
25.2	Appliance not provided with more than one means of connection to the supply mains		P
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A
25.3	Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains:		-
	- a set of terminals allowing the connection of a flexible cord		N/A
	- a fitted supply cord		P
	- a set of supply leads accommodated in a suitable compartment		N/A
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support		N/A
	Fixed appliance and appliances with a mass greater than 40 kg and not provided with rollers or castors, constructed so that the supply cord can be connected after the appliance has been installed in accordance with the manufacturer's instructions (IEC 60335-2-38)		P
	Terminals for permanent connection of cables to fixed wiring, suitable for the type X attachment of a supply cord. Cord anchorage complying with 25.16 fitted in the appliance. (IEC 60335-2-38)		N/A
	Appliance provided with a set of terminals allowing the connection of a flexible cord, suitable for the type X attachment (IEC 60335-2-38)		N/A
	Instruction sheets give full particulars of power supply cord (IEC 60335-2-38)		N/A
	The connection to the supply wires, built-in appliance may be made before the appliance is installed (IEC 60335-2-38)		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm):	15.5mm	P
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29		P
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 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		P
25.6	Plugs fitted with only one flexible cord		N/A



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
25.7	Supply cords, other than for class III appliances, being of the following type:		-
	oil-resistant and not lighter than ordinary polychloroprene (60245 IEC 57) (IEC 60335-2-38)	H07RN	P
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm <sup>2</sup> ) .....	2.5 mm <sup>2</sup>	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
	In multi-phase appliances, the colour of the neutral conductor of the supply cord is blue.		P
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A
25.12	Insulation of the supply cord not damaged when moulding the cord to part of the enclosure		N/A
25.13	Inlet openings so constructed as to prevent damage to the supply cord		P
	If it is not evident that the supply cord can be introduced without risk of damage, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided		N/A
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is		N/A
	class 0, or		N/A
	a class III appliance not containing live parts		N/A
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		-
	- applied force (N).....:		N/A
	- number of flexings.....:		N/A
	The test does not result in:		-
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage to the cord or the cord guard		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- broken strands piercing the insulation and becoming accessible		N/A
25.15	For appliances with supply cord and appliances to be permanently connected to fixed wiring by a flexible cord, conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	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:		-
	- fixed appliances: pull 100 N; torque (not on automatic cord reel) (Nm) .....		P
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm) ..		N/A
	Cord not damaged and max. 2 mm displacement of the cord	0.8mm displacement observed	P
25.16	Cord anchorages for type X attachments constructed and located so that:		-
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of supply cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N/A
	they are separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N/A
	it is part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N/A
	failure of the insulation of the cord does not make accessible metal parts live		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- for class II appliances they are of insulating material, or		N/A
	if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals		N/A
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance		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
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	The conductors of the supply cord for type Y and Z attachment insulated from accessible metal parts		P
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		-
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N/A
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A
25.22	Appliance inlets:		-
	- live parts not accessible during insertion or removal		N/A
	Requirement not applicable to appliance inlets complying with IEC 60320-1		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless		N/A
	the supply cord is unlikely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except that:		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11		N/A
	- the thickness of the insulation may be reduced		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected		N/A
25.25	Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet.		N/A
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N/A
<b>26</b>	<b>TERMINALS FOR EXTERNAL CONDUCTORS</b>		-
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection	Only the equipotential ground bonding terminal is accessible	N/A
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		P
	the connections are soldered		N/A
	Screws and nuts not used to fix any other component, except		P
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		P
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N/A
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		N/A
	Terminals fixed so that when the clamping means is tightened or loosened:		-

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- the terminal does not become loose		N/A
	- internal wiring is not subjected to stress		N/A
	- neither clearances nor creepage distances are reduced below the values in clause 29		N/A
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm) .....		N/A
	No deep or sharp indentations of the conductors		N/A
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and		N/A
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened		N/A
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and,		N/A
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm <sup>2</sup> ):		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		P
26.9	Terminals of the pillar type constructed and located as specified		P
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		P
	conductors ends fitted with means suitable for screw terminals		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	This requirement is substituted by the version of the EN 60335-1	N/A
	For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone	This requirement is substituted by the version of the EN 60335-1	N/A
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free	This requirement is substituted by the version of the EN 60335-1	N/A
<b>27</b>	<b>PROVISION FOR EARTHING</b>		-
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
	Class 0, II and III appliances have no provision for protective earthing		N/A
	Class II appliances and class III appliances can incorporate an earth for functional purposes		N/A
	Safety extra-low voltage circuits not earthed, unless		N/A
	protective extra-low voltage circuits		N/A
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm <sup>2</sup> , and		P
	do not provide earthing continuity between different parts of the appliance, and		P
	conductors cannot be loosened without the aid of a tool		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
	Stationary appliances provided with a terminal for the connection of an external equipotential conductor (IEC 60335-2-38)		P
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		N/A

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		<b>P</b>
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		<b>N/A</b>
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		<b>P</b>
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		<b>P</b>
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		<b>N/A</b>
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		<b>N/A</b>
	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		<b>N/A</b>
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		<b>N/A</b>
27.5	Low resistance of connection between earthing terminal and earthed metal parts		<b>P</b>
	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		<b>N/A</b>
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω) .....	41.1 m Ω	<b>P</b>
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		<b>N/A</b>
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		<b>N/A</b>
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		<b>N/A</b>
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
<b>28</b>	<b>SCREWS AND CONNECTIONS</b>		-
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		<b>P</b>
	Screws not of soft metal liable to creep, such as zinc or aluminium		<b>P</b>
	Diameter of screws of insulating material min. 3 mm		<b>N/A</b>
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity		<b>P</b>
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		<b>P</b>
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		<b>N/A</b>
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		<b>N/A</b>
	For screws and nuts; torque-test as specified in table 14:		<b>P</b>
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless		<b>P</b>
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material		<b>N/A</b>
	This requirement does not apply to electrical connections in circuits of appliances for which:		-
	<ul style="list-style-type: none"> <li>30.2.2 is applicable and that carry a current not exceeding 0,5 A</li> </ul>		<b>N/A</b>
	<ul style="list-style-type: none"> <li>30.2.3 is applicable and that carry a current not exceeding 0,2 A</li> </ul>		<b>N/A</b>
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		<b>P</b>
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		<b>P</b>
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		<b>P</b>
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		-
	- in normal use,		<b>P</b>
	- during user maintenance,		<b>P</b>



Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		P
	At least two screws being used for each connection providing earthing continuity, unless		P
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		N/A
	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or		P
	if an alternative earthing circuit is provided		N/A
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion		P
<b>29</b>	<b>CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION</b>		-
	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

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	For appliances intended for use at altitudes exceeding 2000 m, the clearances in Table 16 is increased according to the relevant multiplier values in Table A.2 of IEC 60664-1		N/A
	Impulse voltage test is not applicable:		-
	- when the microenvironment is pollution degree 3, or		N/A
	- for basic insulation of class 0 and class 01 appliances		N/A
	- to appliances intended for use at altitudes exceeding 2000 m		N/A
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		N/A
	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		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.....:		N/A
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 .....		N/A
	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

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	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
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		-
	- table 16 based on the rated impulse voltage .....		N/A
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from Clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree .....	(see appended table)	P

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	The microenvironment is pollution degree 3 unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance		<b>P</b>
	Tracking index (CTI) not less than 250 unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance (IEC 60335-2-38)		<b>N/A</b>
	Pollution degree 3 applies, unless		<b>P</b>
	- precautions taken to protect the insulation; pollution degree 1		<b>N/A</b>
	- insulation subjected to conductive pollution; pollution degree 2		<b>N/A</b>
	A force of 2 N is applied to bare conductors, other than heating elements		<b>N/A</b>
	A force of 30 N is applied to accessible surfaces		<b>P</b>
	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		<b>N/A</b>
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(see appended table)	<b>P</b>
	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:		<b>N/A</b>
	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.....:		<b>N/A</b>
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or ...:		<b>N/A</b>
	Table 2 of IEC 60664-4, as applicable .....		<b>N/A</b>
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or .....		<b>N/A</b>
	Table 2 of IEC 60664-4, as applicable .....		<b>N/A</b>
29.2.4	Creepage distances of functional insulation not less than specified in table 18.....:	(see appended table)	<b>P</b>
	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:		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	Compliance checked:		-
	- by measurement, in accordance with 29.3.1, or		N/A
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- for insulation, other than single layer internal wiring insulation, by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		N/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		N/A
	Reinforced insulation have a thickness of at least 2 mm		N/A
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consist of at least 2 layers		N/A
	Reinforced insulation consist of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N/A
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19 .....		N/A
<b>30</b>	<b>RESISTANCE TO HEAT AND FIRE</b>		-
30.1	External parts of non-metallic material,		P

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	parts supporting live parts, and		<b>P</b>
	parts of thermoplastic material providing supplementary or reinforced insulation		<b>N/A</b>
	sufficiently resistant to heat		<b>P</b>
	Ball-pressure test according to IEC 60695-10-2		<b>P</b>
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C):	(see appended table)	<b>P</b>
	Parts supporting live parts tested at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C).....:	(see appended table)	<b>P</b>
	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C).....:	(see appended table)	<b>N/A</b>
30.2	Parts of non-metallic material resistant to ignition and spread of fire		<b>P</b>
	This requirement does not apply to:		<b>-</b>
	parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or		<b>N/A</b>
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		<b>P</b>
	Compliance checked by the test of 30.2.1, and in addition:		<b>P</b>
	- for attended appliances, 30.2.2 applies		<b>N/A</b>
	- for unattended appliances, 30.2.3 applies		<b>P</b>
	For appliances for remote operation, 30.2.3 applies		<b>N/A</b>
	For base material of printed circuit boards, 30.2.4 applies		<b>N/A</b>
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 650 °C (IEC 60335-2-38)		<b>P</b>
	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 650 °C, or		<b>P</b>
	the material is classified at least HB40 according to IEC 60695-11-10		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N/A
30.2.2	Not applicable (IEC 60335-2-38)		N/A
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P
	The tests are not applicable to conditions as specified:		P
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and		P
	parts of non-metallic material, other than small parts, within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C		P
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C		N/A
30.2.3.2	Parts of non-metallic material supporting connections, and		P
	parts of non-metallic material within a distance of 3mm,		P
	subjected to glow-wire test of IEC 60695-2-11		P
	The test severity is:		-
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		P
	- 650 °C, for other connections		N/A
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications:		-
	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N/A
	<ul style="list-style-type: none"> <li>775 °C, for connections carrying a current exceeding 0,2 A during normal operation</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>675 °C, for other connections</li> </ul>		N/A
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	The glow-wire test is also not carried out on small parts. These parts are to:		-
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of Annex E, or		N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	The consequential needle-flame test of Annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		-
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		N/A
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts for which the needle-flame test of Annex E was applied, or		N/A
	- small parts for which a material classification of V-0 or V-1 was applied		N/A
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		-
	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or		N/A
	- parts shielded by a flame barrier that meets the needle-flame test of Annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of Annex E		N/A
	Test not applicable to conditions as specified.....:		N/A



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
30.101	Filters of non-metallic materials intended for the absorption of grease are subjected to the burning test of ISO 9772 for category HBF material, or (IEC 60335-2-38)		N/A
	classified at least HB40 according to IEC 60695-11-10 (IEC 60335-2-38)		N/A
<b>31</b>	<b>RESISTANCE TO RUSTING</b>		-
	Relevant ferrous parts adequately protected against rusting		N/A
	Tests specified in part 2 when necessary		N/A
<b>32</b>	<b>RADIATION, TOXICITY AND SIMILAR HAZARDS</b>		-
	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use		P
	Compliance is checked by the limits or tests specified in part 2, if relevant		N/A
<b>A</b>	<b>ANNEX A (INFORMATIVE) ROUTINE TESTS</b>		
	Description of routine tests to be carried out by the manufacturer		P
<b>B</b>	<b>ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES</b>		
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	Three forms of construction covered:		-
	a) Appliance supplied directly from the supply mains or a renewable energy source, the battery charging circuitry and other supply unit circuitry incorporated within the appliance		N/A
	b) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the part of the appliance containing the battery		N/A
	c) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the detachable supply unit		N/A
3.1.9	Appliance operated under the following conditions:		-
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	- if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N/A
	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006		N/A
	Appliances intending to be supplied from a detachable supply unit marked with symbol IEC 60417-6181 and its type reference along with symbol ISO 7000-0790 (2004-01), or		N/A
	use only with <model designation> supply unit ..... .....:		N/A
7.6	Additional symbols		N/A
7.12	The instructions give information regarding charging		N/A
	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N/A
	Details about how to remove batteries containing materials hazardous to the environment given		N/A
	For appliances intending to be supplied from a detachable supply unit for the purposes of recharging the battery, the type reference of the detachable supply unit is stated along with the following:		-
	WARNING: For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance		N/A
	If the symbol for detachable supply unit is used, its meaning is explained		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
7.15	Markings placed on the part of the appliance connected to the supply mains		N/A
	The type reference of the detachable supply unit is placed in close proximity to the symbol		N/A
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment		N/A
	If the appliance can be operated without batteries, double or reinforced insulation required		N/A
11.7	The battery is charged for the period stated in the instructions or 24 h .....		N/A
11.8	Temperature rise of the battery surface does not exceed the limit in the battery manufacturer's specification; measured (K); limit (K) .....		N/A
	If no limit specified, the temperature rise does not exceed 20 K; measured (K) .....		N/A
19.1	Appliances subjected to tests of 19.B.101, 19.B.102 and 19.B.103		N/A
19.10	Not applicable		N/A
19.13	The battery does not rupture or ignite		N/A
19.B.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A
19.B.102	For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged,		N/A
19.B.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N/A
21.B.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being:		-
	- 100, if the mass of the part does not exceed 250 g (g) .....		N/A
	- 50, if the mass of the part exceeds 250 g .....		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts		N/A
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
<b>C</b>	<b>ANNEX C (NORMATIVE) AGEING TEST ON MOTORS</b>		-
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
	Test conditions as specified		N/A
<b>D</b>	<b>ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS</b>		-
	Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard		N/A
	Test conditions as specified		N/A
<b>E</b>	<b>ANNEX E (NORMATIVE) NEEDLE-FLAME TEST</b>		-
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		-
7	Severities		-
	The duration of application of the test flame is 30 s ± 1 s		N/A
9	Test procedure		-
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of Figure 1		N/A
9.2	The first paragraph does not apply		N/A
	If possible, the flame is applied at least 10 mm from a corner		N/A
9.3	The test is carried out on one specimen		N/A
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N/A
11	Evaluation of test results		-
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
<b>F</b>	<b>ANNEX F (NORMATIVE) CAPACITORS</b>		-
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		-
1.5	Terms and definitions		-
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A
1.6	Marking		-
	Items a) and b) are applicable		N/A
3.4	Approval testing		-
3.4.3.2	Table 3 is applicable as described		N/A
4.1	Visual examination and check of dimensions		-
	This subclause is applicable		N/A
4.2	Electrical tests		-
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A
4.2.5.2	Only table 11 is applicable		N/A
	Values for test A apply		N/A
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		-
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		-
	This subclause is applicable		N/A
4.14	Endurance		-
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable		N/A
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	No visible damage		N/A
4.17	Passive flammability test		-
	This subclause is applicable		N/A
4.18	Active flammability test		-
	This subclause is applicable		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
<b>G</b>	<b>ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS</b>		-
	The following modifications to this standard are applicable for safety isolating transformers:		-
7	Marking and instructions		-
7.1	Transformers for specific use marked with:		-
	-name, trademark or identification mark of the manufacturer or responsible vendor.....:		<b>N/A</b>
	-model or type reference.....:		<b>N/A</b>
17	Overload protection of transformers and associated circuits		-
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		<b>N/A</b>
22	Construction		-
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		<b>N/A</b>
29	Clearances, creepage distances and solid insulation		-
29.1, 29.2, 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		<b>N/A</b>
	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances		<b>N/A</b>
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed		<b>N/A</b>
	For safety isolating transformers subjected to periodic voltages with a frequency exceeding 30 kHz, the clearances, creepage distances and solid insulation values specified in IEC 60664-4 are applicable, if greater than the values specified in items 2a, 2c and 3 in table 13 of IEC 61558-1		<b>N/A</b>
<b>H</b>	<b>ANNEX H (NORMATIVE) SWITCHES</b>		-
	Switches comply with the following clauses of IEC 61058-1, as modified below:		-
	The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		<b>N/A</b>
	Before being tested, switches are operated 20 times without load		<b>N/A</b>
8	Marking and documentation		-
	Switches are not required to be marked		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		-
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		-
15.1	Not applicable		N/A
15.2	Not applicable		N/A
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		-
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless		N/A
	otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335.....:		N/A
	Switches for operation under no load and which can be operated only by a tool, and		N/A
	switches operated by hand that are interlocked so that they cannot be operated under load,		N/A
	are not subjected to the tests		N/A
	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation		N/A
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1		N/A
	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K).....:		N/A
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		-
	Clause 20 is applicable to clearances across full disconnection and micro-disconnection		N/A
	It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24		N/A
I	<b>ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE</b>		-

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		-
8	Protection against access to live parts		-
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		-
11.3	The temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	The temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N/A
16	Leakage current and electric strength		-
16.3	Insulation between live parts of the motor and its other metal parts is not subjected to the test		N/A
19	Abnormal operation		-
19.1	The tests of 19.7 to 19.9 are not carried out		N/A
19.I.101	Appliance operated at rated voltage with each of the following fault conditions:		-
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		-
22.I.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
J	<b>ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS</b>		-
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		-
5.7	Conditioning of the test specimens		-



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	When production samples are used, three samples of the printed circuit board are tested		N/A
5.7.1	Cold		-
	The test is carried out at -25 °C		N/A
5.7.3	Rapid change of temperature		-
	Severity 1 is specified		N/A
5.9	Additional tests		-
	This subclause is not applicable		N/A
<b>K</b>	<b>ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES</b>		-
	The information on overvoltage categories is extracted from IEC 60664-1		N/A
	Overvoltage category is a numeral defining a transient overvoltage condition		N/A
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		N/A
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
<b>L</b>	<b>ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES</b>		-
	Information for the determination of clearances and creepage distances		P
<b>M</b>	<b>ANNEX M (NORMATIVE) POLLUTION DEGREE</b>		-
	The information on pollution degrees is extracted from IEC 60664-1		N/A
	Pollution		-

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment		N/A
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		N/A
	Minimum clearances specified where pollution may be present in the microenvironment		N/A
	Degrees of pollution in the microenvironment		-
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		-
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N/A
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N/A
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		N/A
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
<b>N</b>	<b>ANNEX N (NORMATIVE) PROOF TRACKING TEST</b>		-
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		-
7	Test apparatus		-
7.3	Test solutions		-
	Test solution A is used		N/A
10	Determination of proof tracking index (PTI)		-
10.1	Procedure		-
	The proof voltage is 100V, 175V, 250V, 400V or 600V		N/A
	The test is carried out on five specimens		N/A
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N/A
10.2	Report		-
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
<b>O</b>	<b>ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30</b>		-

TEST REPORT N. 1700663AAI

Clause	Requirement + Test	Result - Remark	Verdict
	Description of tests for determination of resistance to heat and fire		<b>P</b>
<b>P</b>	<b>ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES</b>		-
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WDaE		-
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WdaE, if liable to be connected to a supply mains that excludes the protective earthing conductor		-
5.7	The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C		<b>N/A</b>
7.1	The appliance marked with the letters WDaE		<b>N/A</b>
7.12	The instructions state that the appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA		<b>N/A</b>
	The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries		<b>N/A</b>
11.8	The values of Table 3 are reduced by 15 K		<b>N/A</b>
13.2	The leakage current for class I appliances not exceeding 0,5 mA		<b>N/A</b>
15.3	The value of t is 37 °C		<b>N/A</b>
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):		<b>N/A</b>
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		<b>N/A</b>
<b>Q</b>	<b>ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS</b>		-
	Description of tests for appliances incorporating electronic circuits		<b>N/A</b>
<b>R</b>	<b>ANNEX R (NORMATIVE) SOFTWARE EVALUATION</b>		-
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex		<b>N/A</b>
R.1	Programmable electronic circuits using software		-

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 constructed so that the software does not impair compliance with the requirements of this standard		N/A
R.2	Requirements for the architecture		-
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety-related segments of the software		N/A
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:		-
	- single channel with periodic self-test and monitoring		N/A
	- dual channel (homogenous) with comparison		N/A
	- dual channel (diverse) with comparison		N/A
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures:		-
	- single channel with functional test		N/A
	- single channel with periodic self-test		N/A
	- dual channel without comparison		N/A
R.2.2	Measures to control faults/errors		-
R.2.2.1	When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area		N/A
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison		N/A
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths		N/A
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate		N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
R.2.2.5	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, detection of a fault/error occur before compliance with clause 19 is impaired		N/A
R.2.2.6	The software is referenced to relevant parts of the operating sequence and the associated hardware functions		N/A
R.2.2.7	Labels used for memory locations are unique		N/A
R.2.2.8	The software is protected from user alteration of safety-related segments and data		N/A
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 is impaired		N/A
R.3	Measures to avoid errors		-
R.3.1	General		-
	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the following measures to avoid systematic fault in the software are applied		-
	Software that incorporates measures used to control the fault/error conditions specified in table R.2 is inherently acceptable for software required to control the fault/error conditions specified in table R.1		N/A
R.3.2	Specification		-
R.3.2.1	Software safety requirements:	Software Id:	N/A
	The specification of the software safety requirements includes the descriptions listed		N/A
R.3.2.2	Software architecture		-
R.3.2.2.1	The specification of the software architecture includes the aspects listed - techniques and measures to control software faults/errors (refer to R.2.2); - interactions between hardware and software; - partitioning into modules and their allocation to the specified safety functions; - hierarchy and call structure of the modules (control flow); - interrupt handling; - data flow and restrictions on data access; - architecture and storage of data; - time-based dependencies of sequences and data	Document ref. No:	N/A

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
R.3.2.2.2	The architecture specification is validated against the specification of the software safety requirements by static analysis		N/A
R.3.2.3	Module design and coding		-
R.3.2.3.1	Based on the architecture design, software is suitably refined into modules		N/A
	Software module design and coding is implemented in a way that is traceable to the software architecture and requirements		N/A
R.3.2.3.2	Software code is structured		N/A
R.3.2.3.3	Coded software is validated against the module specification by static analysis		N/A
	The module specification is validated against the architecture specification by static analysis		N/A
R.3.3.3	Software validation		-
	The software is validated with reference to the requirements of the software safety requirements specification		N/A
	Compliance is checked by simulation of:		-
	- input signals present during normal operation		N/A
	- anticipated occurrences		N/A
	- undesired conditions requiring system action		N/A

**TEST REPORT N. 1700663AAI**

**Table with modification introduced in CEI EN 60335-1 and CEI EN 60335-2-38**

Clause	Requirement + Test	Result - Remark	Verdict
	<b>CENELEC COMMON MODIFICATIONS (EN)</b>		
6.1	Delete "class 0" and "class 01"		<b>P</b>
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		<b>N/A</b>
	Multi-phase appliances to be connected to the supply mains: 400 V covered		<b>P</b>
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.		<b>P</b>
	An indication that the device has been operated is given by:		-
	<ul style="list-style-type: none"> <li>a tactile feedback, or</li> </ul>		<b>N/A</b>
	<ul style="list-style-type: none"> <li>an audible and visual feedback</li> </ul>	A light is turned on	<b>P</b>
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		<b>P</b>
	- children shall not play with the appliance		<b>P</b>
	- cleaning and user maintenance shall not be made by children without supervision		<b>P</b>
7.12.Z1	The specific instructions related to the safe operation of this appliance is collated together in the front section of the user instructions		<b>P</b>
	The height of the characters, measured on the capital letters, is at least 3 mm	Carattere di altezza inferiore a 3 mm	<b>P</b>
	These instructions are also available in an alternative format, e.g. on a website		<b>P</b>
8.1.1	Also test probe 18 of EN 61032 is applied		<b>P</b>
	The appliance being in every possible position during the test		<b>P</b>
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		<b>P</b>
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		<b>P</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	parts intended to be removed for user maintenance are also not removed		N/A
8.2	Compliance is checked by applying the test probes of EN 61032		N/A
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A
11.8	Footnotes to "External enclosure of motor-operated appliances" to be taken into account		P
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling		N/A
20.2	When using the test probe similar to test probe B with a circular stop face, the accessories and detachable covers are removed		P
	Test probe 18 applied with a force of 2,5N on the appliance fully assembled		P
24.1	Components comply with the safety requirements specified in the relevant standards as far as they reasonably apply		P
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance.		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P
	Components that have not been previously tested or do not comply with the standard for the relevant component are tested according to the requirements of 30.2		N/A
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the standard for the relevant component need not be retested provided that:		-
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		N/A
	- the test report for the component states whether it complied with the standard for the relevant component with or without flame, flames not exceeding 2 s during the test are ignored		N/A
	Unless components have been previously tested and found to comply with the relevant standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A



**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		<b>P</b>
	Components that have not been separately tested and found to comply with the relevant standard, and		<b>N/A</b>
	components that are not marked or not used in accordance with their marking,		<b>N/A</b>
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		<b>N/A</b>
	Lamp holders and starter holders that have not been previously tested and found to comply with the relevant standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant standard under the conditions occurring in the appliance		<b>N/A</b>
	Where the relevant standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		<b>N/A</b>
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		<b>N/A</b>
	with connectors and appliance inlets complying with the standard sheets of IEC 60320-1,		<b>N/A</b>
	if direct supply to these parts from the supply mains gives rise to a hazard		<b>N/A</b>
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003		<b>N/A</b>
	Compliance with Clause 8 of this standard is not impaired by connecting the appliance to a device covered by EN 41003		<b>N/A</b>
24.Z1	For motor running capacitors (IEC 60252-1 type P2) with a metallic enclosure having an overpressure fuse the flame testing of internal plastic parts supporting current carrying connections as required in 30.2.2 and 30.2.3.1 is not necessary		<b>N/A</b>
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC/TR 60083:		<b>-</b>
	- for Class I appliances: standard sheet C2b, C3b or C4:		<b>N/A</b>

**TEST REPORT N. 1700663AAI**

Clause	Requirement + Test	Result - Remark	Verdict
	- for Class II appliances: standard sheet C5 or C6:		N/A
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors or when they are liable to be exposed to significant amount of ultraviolet radiation	Part 2 applied	N/A
	Halogen-free thermoplastic compound sheathed supply cords have properties at least those of:		-
	<ul style="list-style-type: none"> <li>halogen-free thermoplastic compound sheathed cords (H03Z1Z1H2-F or H03Z1Z1-F), for appliances having a mass not exceeding 3 kg</li> </ul>	Part 2 applied	N/A
	<ul style="list-style-type: none"> <li>halogen-free thermoplastic compound sheathed cords (H05Z1Z1H2-F or H05Z1Z1-F), for other appliances</li> </ul>	Part 2 applied	N/A
	Cross-linked halogen-free compound sheathed supply cords have properties at least those of cross-linked halogen-free compound sheathed cords (H07ZZ-F)	Part 2 applied	N/A
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position unless they are held in place near the terminals independently of the solder		N/A
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N/A
32	Compliance regarding electromagnetic fields is checked according to EN 62233	The emissions are lower than 0.5% of the limit	P
Annex I, 19.1.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		N/A
	The duration of the test is as specified in 19.7		N/A

**TEST REPORT N. 1700663AAI**

TABLE: Power input deviation					
Input deviation of/at:	P rated (W)	P measured (W)	$\Delta P$	Required $\Delta P$	Remark
Power supply	12000	11904	-1.0%	+5% / -10%	<b>Pass</b>
Supplementary information: /					

TABLE: Dielectric strength				
Part under test. Between:	Standard reference	Reference voltage (kVac)	Current (mA)	Voltage breakdown
Phases short circuited and PE	<b>13.3</b>	1.0	<2.5	No
Terminal L-N short circuited and PE	<b>16.3</b>	1.43	<2.5	No
<b>VERDICT:</b>	<b>PASS</b>			
Supplementary information: There are not destructive voltage discharge				

TABLE: Measure of leakage current					
Application points		Standard reference	Phase	Current measured ( $\mu A$ )	Limit ( $\mu A$ )
GND	Normal operation	<b>13.2</b>	/	330	12000
GND	Fault L1		/	295	12000
GND	Fault L2		/	245	12000
GND	Fault L3		/	98	12000
GND	Normal operation	<b>16.2</b>	/	400	12000
<b>VERDICT:</b>	<b>PASS</b>				
Supplementary information: /					

TEST REPORT N. 1700663AAI

TABLE: Air clearances						
Overvoltage category:		II		—		
—		Type of insulation:				—
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark
330	0,2* / 0,5 / 0,8**	-	-	-	-	-
500	0,2* / 0,5 / 0,8**	-	-	-	-	-
800	0,2* / 0,5 / 0,8**	-	-	-	-	-
1 500	0,5 / 0,8** / 1,0***	-	-	-	-	-
2 500	1,5 / 2,0***	4.5	-	-	3.2	<b>P</b>
4 000	3,0 / 3,5***	-	-	-	-	-
6 000	5,5 / 6,0***	-	-	-	-	-
8 000	8,0 / 8,5***	-	-	-	-	-
10 000	11,0 / 11,5***	-	-	-	-	-

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

TEST REPORT N. 1700663AAI

PAG.85/116

TABLE: Creepage distances											
Basic, supplementary and reinforced insulation											
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	—	—	—	
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—	—	—	
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—	—	
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—	—	
250	0,56	1,25	1,8	2,5	3,2	3,6	<b>4,0</b>	<b>4,5</b>	—	—	<b>P</b>
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	—	—	—	
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0	—	—	—	
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—	—	—	
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—	—	—	
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—	—	
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—	—	—	
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—	—	—	
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—	—	
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—	—	—	
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—	—	—	
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—	—	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—	—	—	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—	—	—	
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—	—	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—	—	—	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—	—	—	
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—	—	

TEST REPORT N. 1700663AAI

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

**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

TEST REPORT N. 1700663AAI

TABLE: Functional insulation

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	
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	
250	0,42	1,0	1,4	2,0	2,5	2,8	<b>3,2</b>	<b>P/3.6</b>
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	

Supplementary information:

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

**TEST REPORT N. 1700663AAI**

TABLE: Heating test			
—	Test voltage (V):	460	—
—	Ambient (°C):	25.2	—
Thermocouple locations:		Max. temperature rise measured, $\Delta T$ (K)	Max. temperature rise limit, $\Delta T$ (K)
Internal cable		21.0	50
Thermostat (working)		19.2	30
Thermostat (safety)		14.1	30
Contactor		22.6	30
Knob		6.0	60
Handle		18.3	35
Wall		22.8	65
Supplementary information: /			

TABLE: Heating test, resistance method						
—	Test voltage (V) .....		/		—	
—	Ambient, t1 (°C) .....		/		—	
—	Ambient, t2 (°C) .....		/		—	
Temperature rise of winding:		R1 ( $\Omega$ )	R2 ( $\Omega$ )	$\Delta T$ (K)	Max. $\Delta T$ (K)	Insulation class
N/A		N/A	N/A	N/A	N/A	-
N/A		N/A	N/A	N/A	N/A	-
Supplementary information: /						



Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

PAG.89/116

**TEST REPORT N. 1700663AAI**

TABLE: Abnormal operation, temperature rises		
Thermocouple locations	dT (K)	Max. dT (K)
Wall	25.2	150
Cable	20.5	150
<b>Supplementary information:</b> Fault of the working thermostat The temperature limiter acts disconnecting the heating elements		

TABLE: Abnormal operation, temperature rises		
Thermocouple locations	dT (K)	Max. dT (K)
Wall	42.8	150
Cable	21.1	150
<b>Supplementary information:</b> Fault of the contactor The temperature limiter acts disconnecting only one heating element. The device reach a steady state condition		

TABLE: Ball Pressure Test of Thermoplastics			
Allowed impression diameter (mm) .....		2.0	—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
Temperature controller (knob)	-	75	0.7
Coloured plastic enclosure of the light	-	75	0.7
Gland	-	75	0.4
Plastic enclosure of the light	-	125	1.1
Internal plastic part of the light	-	125	1.25
Plastic parts of the thermostat	-	125	0.9
Plastic connector	-	125	1.1
<b>Supplementary information: /</b>			

**TEST REPORT N. 1700663AAI**

TABLE: Resistance to heat and fire - Glow wire tests								
Object/ Part No./ Material	Manufacture r/ trademark	Glow wire test (GWT); (°C)						Verdict
		550	650		750		850	
			te	ti	te	ti		
Temperature controller (knob)	-		X	X				P
Coloured plastic enclosure of the light	-		X	X				P
Gland	-		X	X				P
Plastic enclosure of the light	-		X	X				P
Internal plastic part of the light	-		X	X	X	X	X	P
Plastic parts of the thermostat	-		X	X	X	X	X	P
Plastic connector	-		X	X	X	X	X	P
<b>Supplementary information: /</b>								

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

PAG.91/116

**TEST REPORT N. 1700663AAI**

**ELECTROMAGNETIC COMPATIBILITY TEST**

<b>TEST</b>	<b>ELECTROSTATIC DISCHARGE IMMUNITY (ESD)</b>
<b>REFERENCE STANDARD</b>	CEI EN 61000-4-2 CEI EN 55014-2
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 29°C Humidity: 36%

Discharge application point	N. of discharge	Polarity	Voltage (kV)	Criterion detected
In indirect contact on a vertical metallic surface, 10 cm far, on 4 sides of the equipment	10/side	+/-	4	<b>A</b>
In indirect contact on a horizontal metallic surface, 10 cm far, on 4 sides of the equipment	10/side	+/-	4	<b>A</b>
Direct contact in the following point: - See red dots	10/point	+/-	4	<b>A</b>
In air in the following points: - See yellow dots	10/point	+/-	8	<b>A</b>

<b>STANDARD PERFORMANCE CRITERION:</b>	<b>B</b>
<b>VERDICT:</b>	<b>PASS</b>
<b>NOTE:</b>	/

<b>UNCERTAINTY (k=2)</b>	Peak voltage (8KV): U = 2,5% Peak voltage (4KV): U = 2,8% Rise Time: U = 21,2%	Peak current: U = 9,3% Peak current (a 30ns): U = 7,6% Peak current (a 60ns): U = 8,7%
--------------------------	--	--

The measurement uncertainties stated in this document have been determined according to the document EA-4/02 and are expressed as expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2 corresponding to a confidence level of about 95%.

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

TEST REPORT N. 1700663AAI

PAG.92/116

Discharge application points



Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

TEST REPORT N. 1700663AAI

PAG.93/116

Discharge application points



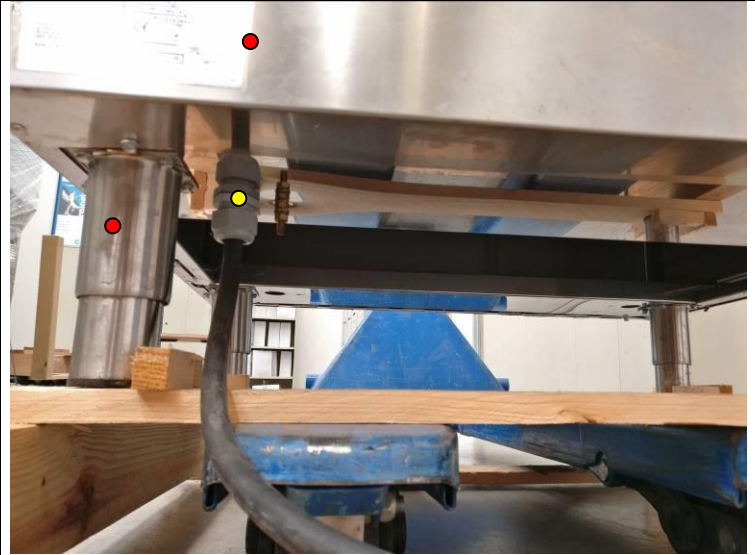
Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

TEST REPORT N. 1700663AAI

PAG.94/116

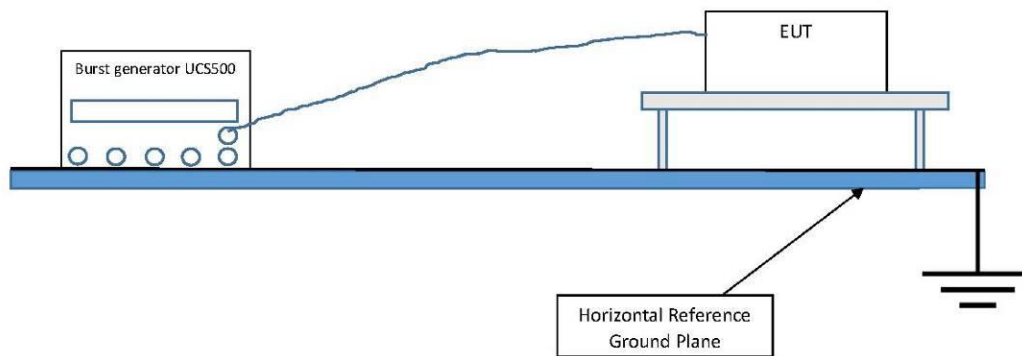
Discharge application points



TEST REPORT N. 1700663AAI

TEST	ELECTRICAL FAST TRANSIENTS AND BURST IMMUNITY TEST
REFERENCE STANDARD:	CEI EN 61000-4-4 CEI EN 55014-2
ENVIRONMENTAL CONDITIONS:	Temperature: 24°C Humidity: 34%

Burst setup picture



Ports for signal lines and control lines (only > 3.0 m)

Voltage peak (kV)	Repetition frequency (kHz)	Burst duration (ms)	Burst period (s)	Polarity	Duration (min)	Circuits	Criterion detected
0.5	5	15	300	+/-	2	N/A	-

Input and output D.C. power port (No applied for battery operated and for not functional connected)

Voltage peak (kV)	Repetition frequency (kHz)	Burst duration (ms)	Burst period (s)	Polarity	Duration (min)	Circuits	Criterion detected
0.5	5	15	300	+/-	2	N/A	-

TEST REPORT N. 1700663AAI

Input and output A.C. power port							
Voltage peak (kV)	Repetition frequency (kHz)	Burst duration (ms)	Burst period (s)	Polarity	Duration (min)	Circuits	Criterion detected
1	5	15	300	+/-	2	L1-L2-L3N-PE	A

STANDARD PERFORMANCE CRITERION:	B
---------------------------------	---

VERDICT:	PASS
----------	------

NOTE:	/
-------	---

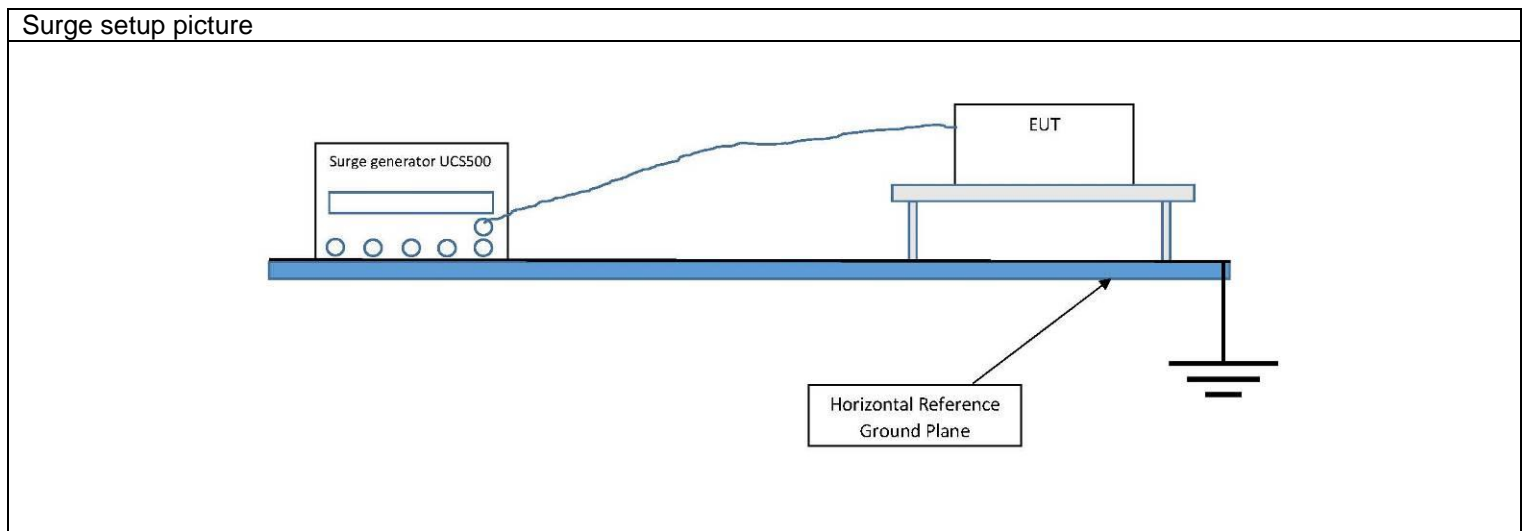
UNCERTAINTY (k=2)	Voltage peak (1000V): U = 10,1%	Burst period (300ms): U = 0,2% Rise time: U = 9,6%
	Repetition frequency (5kHz): U = 1,15%	
	Burst duration (15ms): U =,0,8%	

The measurement uncertainties stated in this document have been determined according to the document EA-4/02 and are expressed as expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2 corresponding to a confidence level of about 95%.



TEST REPORT N. 1700663AAI

<b>TEST</b>	<b>SURGE IMMUNITY TEST</b>
<b>REFERENCE STANDARD:</b>	CEI EN 61000-4-5 CEI EN 55014-2
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 24°C Humidity: 34%



Input A.C. power port					
Amplitude (kV-peak)	Circuits examined	Phase angle	Polarity	Number of pulses for each polarity (total)	Criterion detected
1	L1-N	0°- 90°- 270°	+/-	5 (10)	A
1	L2-N	0°- 90°- 270°	+/-	5 (10)	A
1	L3-N	0°- 90°- 270°	+/-	5 (10)	A
2	L1-PE	0°- 90°- 270°	+/-	5 (10)	A
2	L2-PE	0°- 90°- 270°	+/-	5 (10)	A
2	L3-PE	0°- 90°- 270°	+/-	5 (10)	A
2	N-PE	0°- 90 - 270°	+/-	5 (10)	A
1	L1-L2-N	0°- 90 - 270°	+/-	5 (10)	A
1	L1-L3-N	0°- 90 - 270°	+/-	5 (10)	A
1	L2-L3-N	0°- 90 - 270°	+/-	5 (10)	A
2	L1-L2-PE	0°- 90 - 270°	+/-	5 (10)	A

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

PAG.98/116

**TEST REPORT N. 1700663AAI**

2	L1-L3-PE	0°- 90 - 270°	+/-	5 (10)	<b>A</b>
2	L2-L3-PE	0°- 90 - 270°	+/-	5 (10)	<b>A</b>

<b>STANDARD PERFORMANCE CRITERION:</b>	<b>B</b>
<b>VERDICT:</b>	<b>PASS</b>
<b>NOTE:</b>	/

<b>UNCERTAINTY (k=2)</b>	Peak voltage (1000V): U = 7,9% Peak voltage (2000V): U = 7,8%	Rise time: U = 20,9% Time to half-value: U = 15,5%
--------------------------	--	---

The measurement uncertainties stated in this document have been determined according to the document EA-4/02 and are expressed as expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor  $k = 2$  corresponding to a confidence level of about 95%.

**TEST REPORT N. 1700663AAI**

<b>TEST</b>	<b>VOLTAGE DIPS AND INTERRUPTIONS TEST</b>
<b>REFERENCE STANDARD:</b>	CEI EN 61000-4-11 CEI EN 55014-2
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 27°C Humidity: 38%

Input A.C. power port						
Test Voltage (%Vn)	Voltage value (V)	Period of voltage variation (ms)	Phase angle between voltage and the begin of voltage dip (°)	Period between two voltage variations (s)	Criterion detected	Standard performance criterion
< 5	0	10	0	10	A	C
40	160	200	0	10	A	C
70	280	500	0	10	A	C

<b>VERDICT:</b>	<b>PASS</b>
<b>NOTE:</b>	/

<b>UNCERTAINTY (k=2)</b>	Period of dips (10ms): U = 0,1% Period of dips (200ms): U = 2,7% Period of dips (500ms): U = 6,5% Period of dips (5000ms): U = 89,8% Generated voltage (92V): U = 0,1% Generated voltage (161V): U = 0,1%	Generated voltage (230V): U = 0, 1% Phase angle (90°): U = 2,8% Phase angle (180°): U = 3,5% Phase angle (270°): U = 4,5% Phase angle (0°): U = 5,3%
--------------------------	--	--

The measurement uncertainties stated in this document have been determined according to the document EA-4/02 and are expressed as expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2 corresponding to a confidence level of about 95%.

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

**TEST REPORT N. 1700663AAI**

<b>TEST</b>	<b>IMMUNITY TO CONDUCTED DISTURBANCES, INDUCED BY RADIO-FREQUENCY FIELDS</b>
<b>REFERENCE STANDARD:</b>	CEI EN 61000-4-6 CEI EN 55014-2
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 27°C Humidity: 39%

<b>Points of application of the disturbance</b>	- Power supply cable
---	----------------------

Injected currents, 0.15 MHz to 80 MHz	Ports for signal lines and control lines	Input and output D.C. power port	Input and output A.C. power port	Criterion detected
<b>Amplitude</b>	1 Veff	1 Veff	3 Veff	<b>A / N/A</b>
<b>Frequency</b>	0.15 to 80 MHz	0.15 to 80 MHz	0.15 to 80 MHz	

Injected currents, 0.15 MHz to 230 MHz	Ports for signal lines and control lines	Input and output D.C. power port	Input and output A.C. power port	Criterion detected
<b>Amplitude</b>	1 Veff	1 Veff	3 Veff	<b>A / N/A</b>
<b>Frequency</b>	0.15 to 230 MHz	0.15 to 230 MHz	0.15 to 230 MHz	

<b>Modulation frequency</b>	1 kHz
<b>Modulation depth</b>	80 %
<b>Dwell time</b>	3 s
<b>Increase of frequency</b>	1%

<b>STANDARD PERFORMANCE CRITERION:</b>	<b>A</b>
<b>VERDICT:</b>	<b>PASS</b>
<b>NOTE:</b>	During the test no malfunction were observed

## TEST REPORT N. 1700663AAI

PAG.101/116

TEST	RADIATED, RADIO-FREQUENCY, ELECTROMAGNETIC FIELD IMMUNITY
REFERENCE STANDARD:	CEI EN 61000-4-3 CEI EN 55014-2
ENVIRONMENTAL CONDITIONS:	Temperature: (23±1)°C Humidity: (48±5)%

Enclosure port	
Field intensity	3 V/m
Frequency	da 80 MHz a 1.0 GHz
Modulation frequency	1 kHz
Modulation depth	80 %
Period of modulation	3 s
Antenna distance	3 m
Antenna height above ground	1,5 m
Polarization antenna	Vertical e horizontal
Increase of frequency	1%

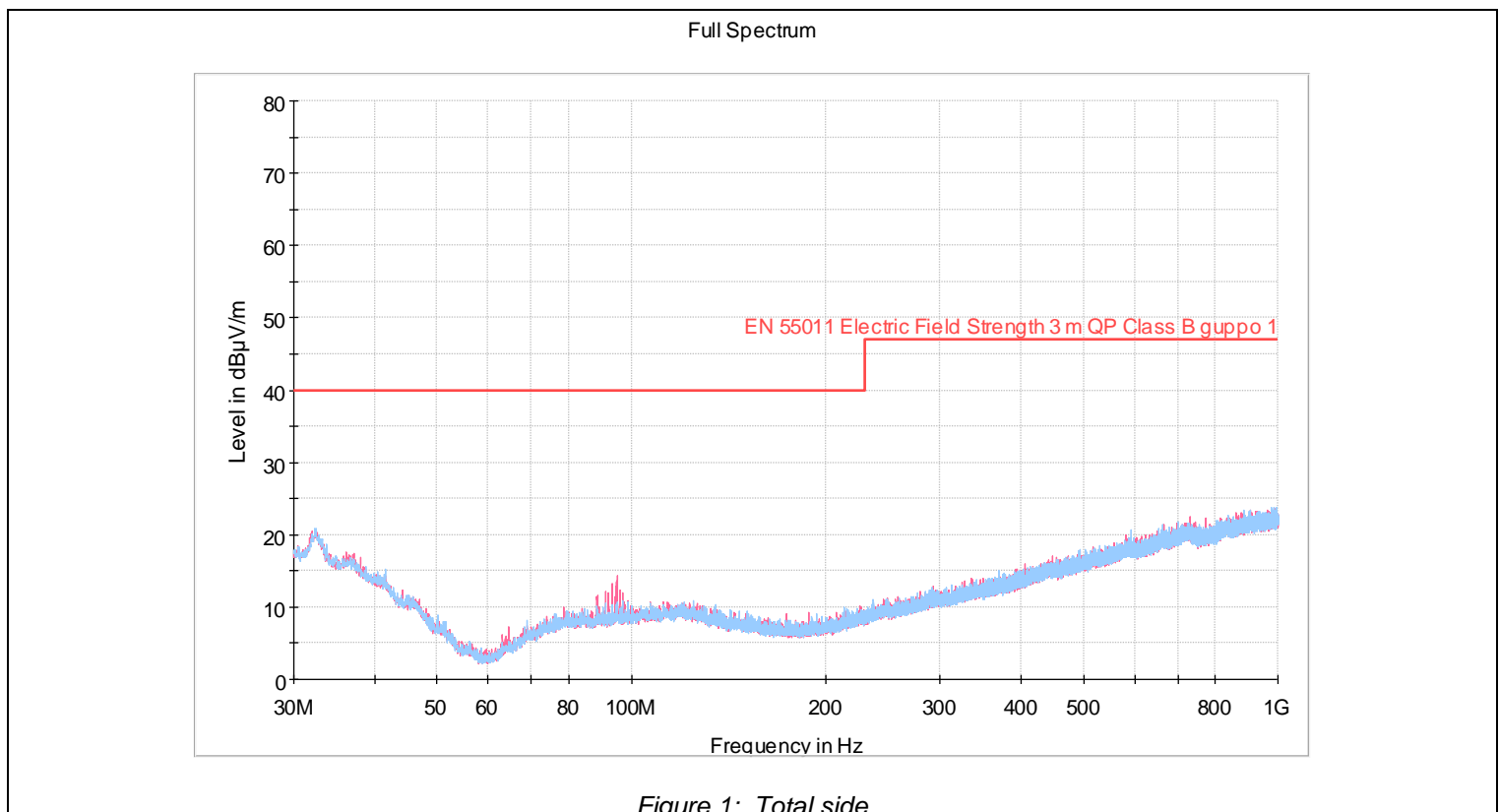
CRITERION DETECTED:	A
STANDARD PERFORMANCE CRITERION:	A
VERDICT:	PASS
NOTE:	During the test no malfunction were observed

TEST REPORT N. 1700663AAI

<b>TEST</b>	<b>MEASURE OF RADIATED EMISSIONS</b>
<b>STANDARD REFERENCE:</b>	CEI EN 55011 CEI EN 55014-1
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: (23±1)°C Humidity: (48±5)%

<b>Antenna distance</b>	3 m
<b>Antenna height above ground</b>	1÷4 m
<b>Polarization antenna</b>	Vertical e horizontal
<b>Limit</b>	Red line: Quasi-Peak limit line. Peak (magenta line): vertical polarization. Peak (cyan line): horizontal polarization.

<i>Frequency range (MHz)</i>	<i>Quasi-peak limit (dBµV)</i>	<b>VERDICT</b> <i>Horizontal polarization (fig.1)</i>	<b>VERDICT</b> <i>Vertical polarization (fig.1)</i>
30 ÷ 230	30	<b>PASS</b>	<b>PASS</b>
230 ÷ 1000	37	<b>PASS</b>	<b>PASS</b>



TEST REPORT N. 1700663AAI

<b>TEST</b>	<b>MEASURE OF CONDUCTED EMISSIONS</b>
<b>STANDARD REFERENCE:</b>	CEI EN 55011 CEI EN 55014-1
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 26°C Humidity: 41%

<b>Colors in the chart:</b>	Limit and measurement in quasi peak: blue line Limit and measurement in average value: red line Measured value: grey line (measured in peak)	
<b>Classification:</b>	1	Household appliances and equipment causing similar disturbances and regulating controls incorporating semiconductor devices
	2	Mains terminals of tools

<b>Classification type 1</b>				
Frequency range (MHz)	At mains terminals		At load terminals and additional terminals	
	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)
0.15 ÷ 0,5	From 66 to 56	From 59 to 46	80	70
0.5 ÷ 5	56	46	74	64
5 ÷ 30	60	50	74	64

<b>Classification type 2</b>						
Frequency range (MHz)	Rated motor power not exceeding 700 W		Rated motor power above 700 W and not exceeding 1 000 W		Rated motor power above 1 000 W	
	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)
0.15 ÷ 0,35	From 66 to 59	From 59 to 49	From 70 to 63	From 63 to 53	From 76 to 69	From 69 to 59
0.35 ÷ 5	59	49	63	53	69	59
5 ÷ 30	64	54	68	58	74	64

TEST REPORT N. 1700663AAI

Applicate of 55014-1:	Classification type 1 - At mains terminals	
<b>VERDICT</b> Phase L1 (fig.2)	<b>VERDICT</b> Phase L2 (fig.3)	
<b>PASS</b>	<b>PASS</b>	
<b>VERDICT</b> Phase L3 (fig.4)	<b>VERDICT</b> Phase N (fig.5)	
<b>PASS</b>	<b>PASS</b>	

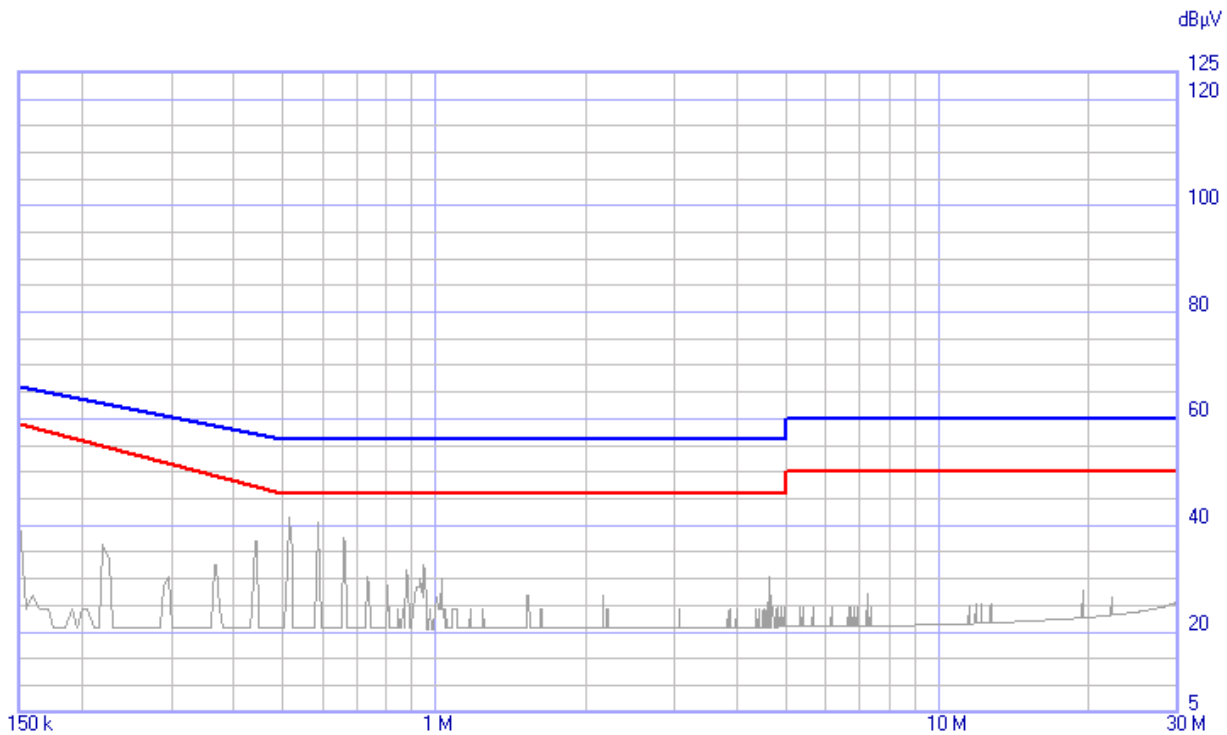


Figure 2: Trend of the disturbance on L1 power conductor  
See table below for highest peaks characterization

Frequency (MHz)	QuasiPeak (dBµV)	AVG (dBµV)	Limit QPK (dBµV)	Margin QPK (dBµV)	Limit AVG (dBµV)	Margin AVG (dBµV)
/	/	/	/	/	/	/



TEST REPORT N. 1700663AAI



Figure 3: Trend of the disturbance on L2 power conductor  
See table below for highest peaks characterization

Frequency (MHz)	QuasiPeak (dBµV)	AVG (dBµV)	Limit QPK (dBµV)	Margin QPK (dBµV)	Limit AVG (dBµV)	Margin AVG (dBµV)
/	/	/	/	/	/	/

Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

PAG.106/116

TEST REPORT N. 1700663AAI



Figure 4: Trend of the disturbance on L3 power conductor  
See table below for highest peaks characterization

Frequency (MHz)	QuasiPeak (dBµV)	AVG (dBµV)	Limit QPK (dBµV)	Margin QPK (dBµV)	Limit AVG (dBµV)	Margin AVG (dBµV)
/	/	/	/	/	/	/

TEST REPORT N. 1700663AAI

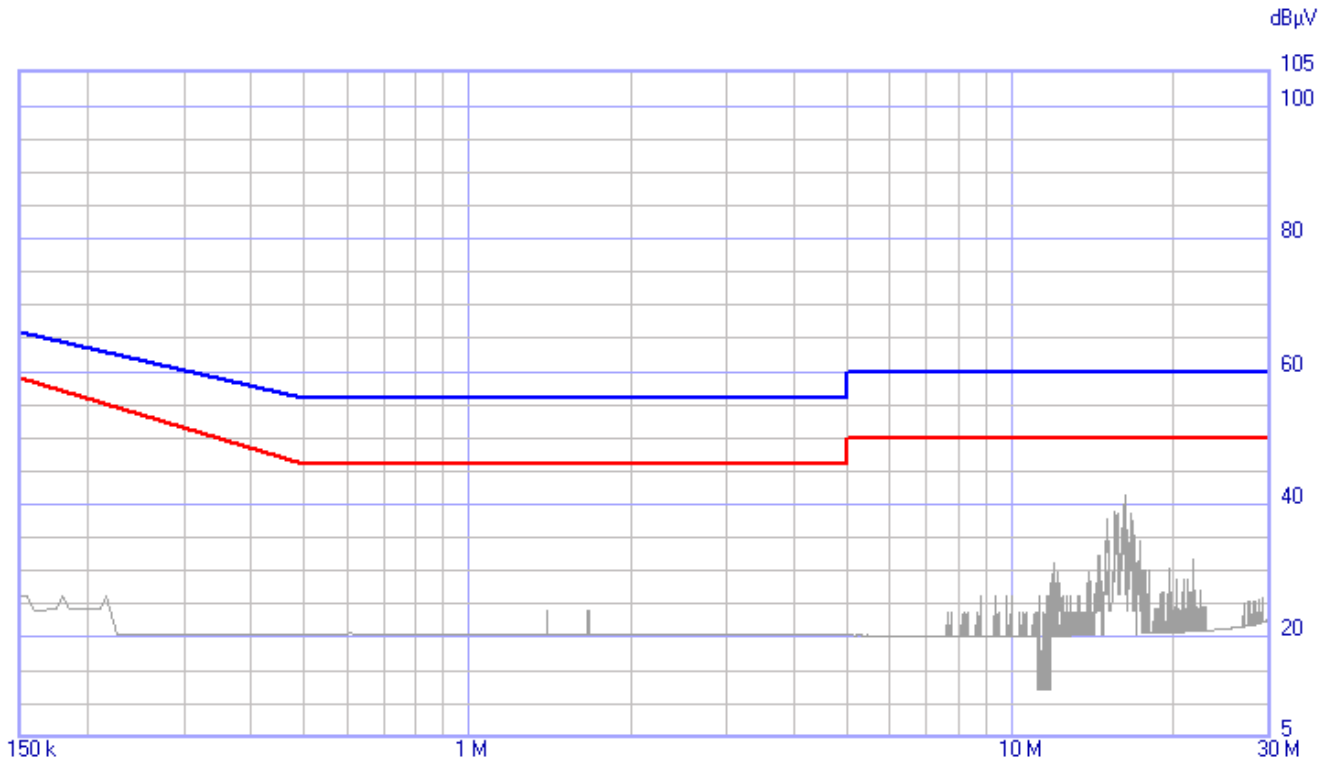


Figure 5: Trend of the disturbance on N power conductor  
See table below for highest peaks characterization

Frequency (MHz)	QuasiPeak (dBµV)	AVG (dBµV)	Limit QPK (dBµV)	Margin QPK (dBµV)	Limit AVG (dBµV)	Margin AVG (dBµV)
/	/	/	/	/	/	/

**TEST REPORT N. 1700663AAI**

<b>TEST</b>	<b>MEASURE OF DISTURBANCE POWER</b>
<b>STANDARD REFERENCE:</b>	CEI EN 55011 CEI EN 55014-1
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 26°C Humidity: 41%

<b>Colors in the chart:</b>	Limit and measurement in quasi peak: blue line Limit and measurement in average value: red line Measured value: grey line (measured in peak)	
<b>Classification:</b>	1	Household and similar appliances
	2	Tools

	Household and similar appliances		Tools	
Frequency range (MHz)	--		Rated motor power not exceeding 700 W	
	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)
30 ÷ 300	From 45 to 55	From 35 to 45	From 45 to 55	From 35 to 45

	Tools		Tools	
Frequency range (MHz)	Rated motor power above 700 W and not exceeding 1 000 W		Rated motor power above 1 000 W	
	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)	Quasi-peak limits (dB $\mu$ V)	Average Limits (dB $\mu$ V)
30 ÷ 300	From 49 to 59	From 39 to 49	From 55 to 65	From 45 to 55



LABORATORIO ACCREDITATO  
LAB N° 0001



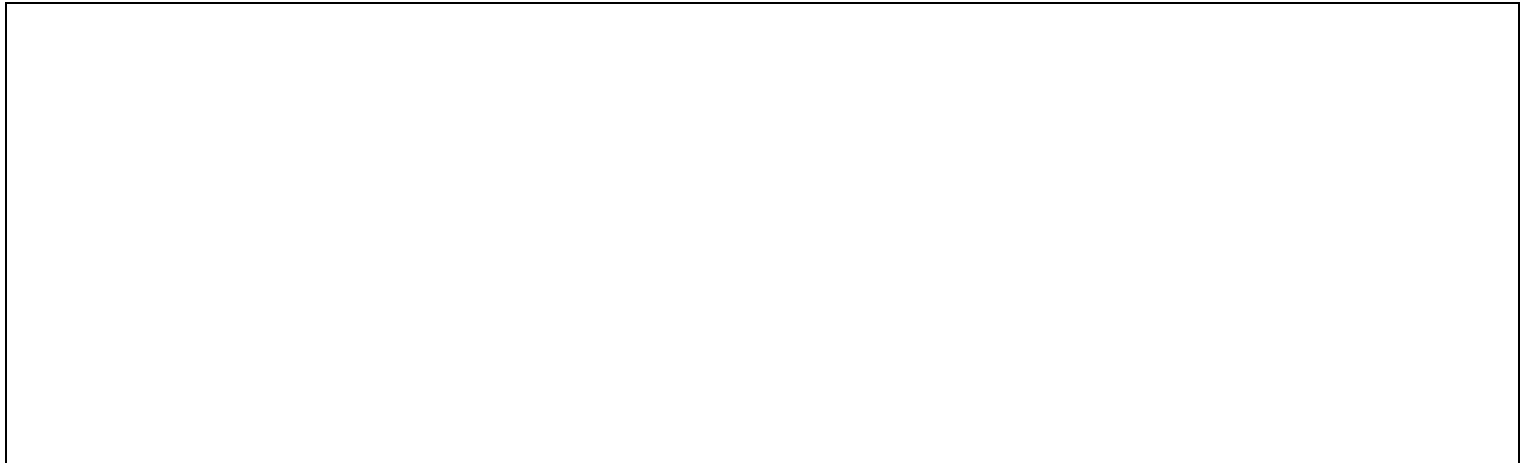
Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

**TEST REPORT N. 1700663AAI**

PAG.109/116

Applicate of 55014-1:	Not applicable
VERDICT:	/



**TEST REPORT N. 1700663AAI**

<b>TEST</b>	<b>DISCONTINUOUS DISTURBANCE</b>
<b>STANDARD REFERENCE:</b>	CEI EN 55011 CEI EN 55014-2
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 26°C Humidity: 41%

FIRST RUN							
Frequency (MHz)	Limit L (dB $\mu$ V)	Number of Clicks			Switching operation	Time (min)	Click rate N
		< 10 ms	10 to 20 ms	>20 ms			
0.15	75	0	0	0	-	120	0
0.50	75	0	0	0	-	120	0

<b>VERDICT:</b>	<b>PASS</b>
<b>NOTE:</b>	/



Kiwa Cermet Italia S.p.A. Società con socio unico,  
soggetta all'attività di direzione e coordinamento  
di Kiwa Italia Holding Srl  
Via Cadriano, 23 - 40057 Granarolo dell'Emilia (BO)  
Tel +39.051.459.3.111 Fax +39.051.763.382  
laboratorio@kiwacermet.it - www.kiwacermet.it

LAB N° 0001

PAG.111/116

**TEST REPORT N. 1700663AAI**

<b>TEST</b>	<b>DETECTION OF VOLTAGE FLUCTUATIONS AND FLICKER</b>
<b>STANDARD REFERENCE:</b>	CEI EN 61000-3-3
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 27°C Humidity: 38%

	<b>EUT values</b>	<b>Limit</b>	<b>Verdict</b>
Pst	0.090	1.00	PASS
Plt	0.090	0.65	PASS
dc [%]	0.068	3.30	PASS
dmax [%]	0.254	4.00	PASS
dt [s]	0.000	0.50	PASS

**TEST REPORT N. 1700663AAI**

<b>TEST</b>	<b>MEASURE OF CURRENT HARMONICS EMISSION</b>
<b>STANDARD REFERENCE:</b>	CEI EN 61000-3-2
<b>ENVIRONMENTAL CONDITIONS:</b>	Temperature: 27°C Humidity: 38%

<b>Classification of EUT:</b>	A class
-------------------------------	---------

Maximum value of current harmonics									
Current harmonics	I <sub>eff</sub> [A]	% of Limit	Limit [A]	Verdict	Current harmonics	I <sub>eff</sub> [A]	% of Limit	Limit [A]	Verdict
1	286.146E-3				21	5.768E-3	2.393	241.06E-3	PASS
2	15.574E-3	0.641	2.43	PASS	22	1.281E-3	0.681	188.19E-3	PASS
3	226.927E-3	4.385	5.17	PASS	23	4.278E-3	1.944	220.12E-3	PASS
4	13.676E-3	1.414	967.50E-3	PASS	24	1.224E-3	0.709	172.48E-3	PASS
5	139.320E-3	5.432	2.56	PASS	25	4.180E-3	2.064	202.50E-3	PASS
6	7.537E-3	1.117	675.00E-3	PASS	26	1.167E-3	0.733	159.23E-3	PASS
7	64.740E-3	3.737	1.73	PASS	27	3.088E-3	1.647	187.49E-3	PASS
8	4.508E-3	0.871	517.50E-3	PASS	28	1.161E-3	0.785	147.85E-3	PASS
9	26.908E-3	2.990	900.00E-3	PASS	29	2.429E-3	1.392	174.58E-3	PASS
10	3.464E-3	0.837	414.00E-3	PASS	30	1.067E-3	0.773	137.99E-3	PASS
11	29.308E-3	3.947	742.50E-3	PASS	31	2.487E-3	1.523	163.31E-3	PASS
12	2.340E-3	0.678	344.99E-3	PASS	32	1.280E-3	0.989	129.38E-3	PASS
13	21.161E-3	4.478	472.50E-3	PASS	33	1.785E-3	1.164	153.41E-3	PASS
14	2.135E-3	0.722	295.72E-3	PASS	34	1.008E-3	0.827	121.77E-3	PASS
15	12.433E-3	3.684	337.50E-3	PASS	35	1.673E-3	1.156	144.65E-3	PASS
16	1.600E-3	0.619	258.75E-3	PASS	36	1.038E-3	0.903	115.00E-3	PASS
17	9.311E-3	3.127	297.79E-3	PASS	37	1.651E-3	1.206	136.82E-3	PASS
18	2.011E-3	0.874	229.99E-3	PASS	38	953.557E-6	0.875	108.95E-3	PASS
19	8.138E-3	3.054	266.44E-3	PASS	39	1.235E-3	0.952	129.80E-3	PASS
20	1.425E-3	0.689	207.00E-3	PASS	40	913.728E-6	0.883	103.50E-3	PASS



**TEST REPORT N. 1700663AAI**

<b>INTERNAL INSTRUMENTS FOR ELECTROMAGNETIC COMPATIBILITY (EMC)</b>				
<b>Instrume3nt</b>	<b>Manufacturer</b>	<b>Model</b>	<b>ID</b>	<b>Calibration date</b>
Thermo-hygrometer	Madge Tech	PHRTEMP2000	IM185	2016-10-19
ESD simulator	TESEQ	NSG 437	IM181	2017-07-07
Digital Chronometer	LOWELL	/	IX018	2016-11-07
Multimeter	Fluke	179	IM120	2017-01-16
Burst generator	EM TEST	UCS 500N	IM160	2017-06-20
Surge generator	EM TEST	UCS 500N	IM160	2017-06-20
Dip voltage generator	EM TEST	UCS 500N	IM160	2017-06-20
Variac	S.I.P.I.E. SPA	D30	IM068	/
RF Signal generator	PMM	PMM3010	IM196	2016-12-21
Attenuator	ATT 6	/	IM078	2017-05-25
RF CDN	EM TEST	M3	IM086	2017-05-23
EMI Receiver	NARDA	PMM 9010	IM130	2015-02-03
EMI Receiver	NARDA	PMM 9030	IM131	2015-01-30
Clickmeter	NARDA	PMM 9010 Click	IM132	2015-02-03
LISN mono-phase	ROLF HEINE	NNB-2/16Z	IM073	2017-01-13
Harmonics and flickers	EM TEST	DPA 500	IM093	2011-07-15
Test power supply	ELETTROTEST	TPS/M 6000	IM095	2016-04-14
Insulation transformer	Ideomat Italia	TM164	IM067	/
Dielectric strength tester	ABAG	DST-6kV.2	IM046	2017-01-23
Digital Caliper Centesimal	MITUTOYO	500-181-30	ID199	2017-05-23
Current Clamp	FLUKE	80i-500s	IM053	2017-01-10
Leakage tester device	ABAG	LK-2000/MN	IM045	2017-02-13

**TEST REPORT N. 1700663AAI**

**EXTERNAL INSTRUMENTS FOR ELECTROMAGNETIC COMPATIBILITY (EMC)**

Instrument	Manufacturer	Model	ID	Data calibration
RF signal generator 9kHz ÷ 6GHz	Rohde & Schwarz	SMB100A	/	2016-10
RF Power Amplifiers 10MHz÷ 2GHz	Rohde & Schwarz	/	/	2016-01
RF Power Amplifiers 800MHz ÷ 4.2GHz	Amplifier Research	25S1G4A	/	2016-01
Antenna	Rohde & Schwarz	HL 562	/	2014-11
EMI receiver	Rohde & Schwarz	ESR7	/	2016-10
Anechoic chamber	Albatross Project	B83117-A1531-T162	/	2013-04

**INSTRUMENTS FOR ELECTRICALSAFETY**

Instrument	Manufacturer	Model	ID	Calibration date
Thermo-hygrometer	Madge Tech	PHRTEMP2000	IM185	2016-10-19
Climatic chamber	Angelantoni	CH1200	IM071	2016-02-13
Multimeter	Fluke	43	IM052	2016-09-20
Current clamp	Fluke	80i-500s	IM053	2017-01-10
Digital Caliper	Mitutoyo	500-181-30	ID199	2017-05-23
Digital Chronometer	LOWELL	/	IX018	2016-11-14
Dielectric strength tester	ABAG	DST-6kV	IM046	2017-01-23
Leakage currents	ABAG	LK-2000/MN	IM045	2017-02-13
Leakage currents	ABAG	100890	IM180	2017-01-17
Insulation transformer	Ideomat Italia	TM164	IM067	/
Data Logger	AGILENT	34970A	IM104	2016-01-27
Variable resistor	Belotti	D-44	IM150	/
Test wire	ATS di Galbusera	01.12	IM157	2016-02-02
Rigid test finger	ATS di Galbusera	01.02-A	IM059	2017-02-06

TEST REPORT N. 1700663AAI

INSTRUMENTS FOR ELECTRICALSAFETY				
Instrument	Manufacturer	Model	ID	Calibration date
Articulated test finger	ATS di Galbusera	01-01	IM060	2017-02-06
Hook test	ATS di Galbusera	01.26	IM156	2016-01-11
Test plug short	ATS di Galbusera	01.03	IM158	2015-11-18
Digital oscilloscope	Tektronix	TDS 210	IM056	2017-01-23
High voltage probe	Testec	TT-HV150	IM201	2017-02-14
Voltage sectioning	Kiwa	/	IM118	/
Rain device	ATS di Galbusera	03.10-O	IM143	2011-06-06
Ball impact test	/	50 mm	IM136	2015-01-17
Sphere test	ATS di Galbusera	6 mm	IM138	2016-01-28
Dynamometer	IMADA	DS2-1000N	IM183	2016-10-19
Torsiometer	IMADA	HTGS-5N	IM184	2016-11-07
Hammer spring	PTL	F 22.50	IM042	2017-02-27
Rigid sphere without handle	ATS di Galbusera	IP2X	IM153	2015-02-04
Rays-meter	/	R 1÷7 mm	ID211	2015-11-20
Rays-meter	/	R 7.5÷15 mm	ID212	2015-07-22
Vibration system	Belotti	L0620M-PA106	IM164	/
Accelerometer	BRUEL & KJAER	4533B	IM166	2014-02-18
Accelerometer	BRUEL & KJAER	4533-B-001	IM167	2014-02-28

**NOTES**

Samples are maintained for 6 months after the delivery of the test documents. The samples in excess are stored in industrial atmosphere; this might involve a deterioration that would jeopardize the relevant use or test repetition. **Kiwa Cermet Italia** does not assure that after the above said term the samples are still traceable.

TEST REPORT N. 1700663AAI

PAG.116/116

**DICHIARAZIONE PER ESTENSIONE MODELLI  
- GRIGLIA AD ACQUA /WATER GRILL RANGE -**

Si dichiara,  
che il modello di seguito elencato differisce da quello di derivazione testato, per  
differenze estetiche, per le diverse dimensioni d'ingombro e per la diversa potenza

MODELLO DERIVATO	DIMENSIONI D'INGOMBRO	POTENZA NOMINALE	MODELLO DI DERIVAZIONE	DIMENSIONI D'INGOMBRO	POTENZA NOMINALE
AQE777	800x730xh850	12 kW	AQE477	400x730xh850	6 kW

Brescia, il 18/05/17

**Manghi Manuele**  
Laboratory R. & D. Engineer

