

CERTIFICATE ZERTIFIKAT

GS/25/HEL/02241



Order no. / Auftragsnr.: SD-CERT251105032-01
Test report ref. / Prüfbericht-Nr.: GZES251102215601

Issue date / ausgestellt: 2025-12-29
Invalid from / ungültig ab: 2030-12-29

License Holder / Genehmigungsinhaber:

Guangdong Galanz Enterprises Co., Ltd.
25 South Ronggui Avenue, Ronggui Street, Shunde District, Foshan, Guangdong, China

Manufacturing Plant(s) / Fertigungsstätte(n):

Guangdong Galanz Appliances Manufacturing Co., Ltd.
3 East Xingpu Avenue, Maxin Industrial Zone, Huangpu Town, Zhongshan, Guangdong, China

Certified Product / Zertifiziertes Produkt:

Product / Produkt: Commercial Microwave Oven /
Mikrowellenkochgeräte für gewerblichen Gebrauch

Type/Model No. / Typ/Modell-Nr.: P110M25AL-5S, P110M25ASL-5S

Trademarks / Markenzeichen: Galanz

Characteristics / Technische Daten: 230 V – 240 V; 50 Hz; Class / Schutzklasse: I;
Microwave input/output / Mikrowellen Ein/Ausgangsdaten:
1600 W / 1100 W; 2450 MHz

Tested according to / Geprüft nach:

EN IEC 60335-2-90:2021 + A1:2021
EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A2:2019
+ A14:2019 + A15:2021 + A16:2023
EN 62233:2008; AfPS GS 2019:01 PAK

The product fulfils the requirements of the German Product Safety Act to ensure safety and health (§ 21 (1) ProdSG). The license holder is authorized to mark the described product with the GS mark as shown above. Marking requirements of § 6 (1) ProdSG have to be observed when making the certified products available on the market.

Das Produkt entspricht den Anforderungen des Produktsicherheitsgesetzes hinsichtlich der Gewährleistung von Sicherheit und Gesundheit (§ 21 (1) ProdSG). Der Genehmigungsinhaber ist berechtigt, das beschriebene Produkt mit dem GS-Zeichen in der oben abgebildeten Form zu kennzeichnen. Bei Bereitstellung auf dem Markt sind die Kennzeichnungspflichten gemäss § 6 (1) ProdSG einzuhalten.

Remarks / Bemerkungen: -

SGS Fimko Ltd

Signature


Ralf Klingberg
Certification Manager

The test mark regulation is an integral part of this certificate. Die Zertifizierungsbestimmungen sind integraler Bestandteil des Zertifikates.

Page 1 of 1

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Certificate issued by

SGS Fimko Oy

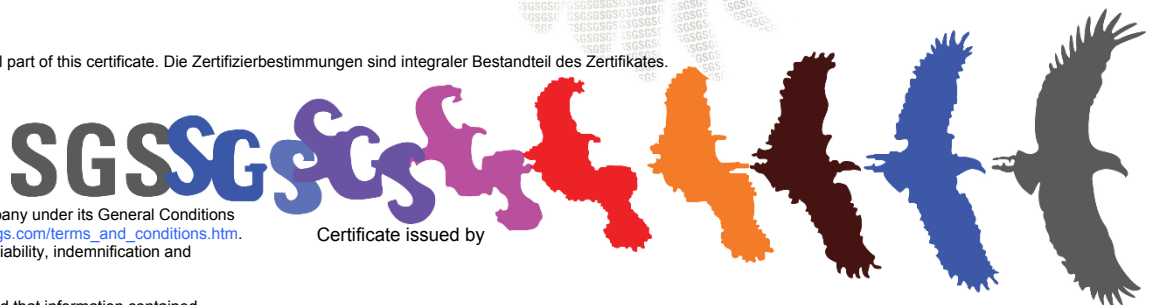
Takomotie 8

FI-00380 Helsinki, Finland

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Business ID 0634247-4

Member of the SGS Group (SGS SA)





To:
Guangdong Galanz Enterprises Co., Ltd.
25 South Ronggui Avenue, Ronggui Street,
Shunde District, Foshan, Guangdong, China

2025-12-29

Application for: *GS Mark license*
Certificate No.: *GS/25/HEL/02241*
Product: *Commercial Microwave Oven / Mikrowellenkochgeräte für gewerblichen Gebrauch*
Type: *P110M25AL-5S, P110M25ASL-5S*

Dear Sir/Madam,

The submitted sample of your product has been tested and found in compliance with the required standards on the certificate as stipulated above.
Additionally, if the authorized representative changes, please inform us immediately.

Kind Regards

Ralf Klingberg
Certification Body
SGS Fimko Ltd

VERIFICATION OF COMPLIANCE

No.: LVD GZES2511022156HS

Applicant: Guangdong Galanz Enterprises Co., Ltd.
25 South Ronggui Avenue, Ronggui Street, Shunde District,
Foshan, Guangdong, China

Manufacturer: Guangdong Galanz Appliances Manufacturing Co., Ltd.
3 East Xingpu Avenue, Maxin Industrial Zone, Huangpu Town,
Zhongshan, Guangdong, China

Product Name: Commercial Microwave Oven

Product Description: Commercial Microwave Oven

Model No.: P110M25AL-5S, P110M25ASL-5S

Trade Mark: **Galanz**

Rating: 230 V – 240 V, 50 Hz, 1600 W,
Microwave output: 1100 W, 2450 MHz

Protection against Electric Shock: Class I

Additional Information: -

Sufficient samples of the product have been tested and found to be in conformity with

Test Standard: EN IEC 60335-2-90: 2021 + A1: 2021
EN 60335-1: 2012 + A11: 2014 + A13: 2017 + A1: 2019 + A14:
2019 + A2: 2019 + A15: 2021 + A16: 2023
EN 62233: 2008

as shown in the

Test Report Number(s): GZES251102215601

This Verification of Compliance has been granted to the applicant based on the results of tests, performed by Laboratory of SGS-CSTC Standards Technical Services Co., Ltd. on sample of the above-mentioned product in accordance with the provisions of the relevant harmonized standards under the Low Voltage Directive 2014/35/EU. The CE marking can be affixed, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The affixing of the CE marking presumes in addition that the conditions in annexes III and IV of the Directive are fulfilled.


David Guo
Technical Manager



SGS-CSTC Standards Technical Services Co., Ltd.

2025-12-29

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SGS-CSTC Standards Technical Services Co., Ltd.
16F, Century Yu Hui Mansion, No.73, Fucheng Road, Haidian
District, Beijing, 100142, CHINA
www.sgsgroup.com.cn
Member of the SGS Group (SGS SA)

VERIFICATION OF COMPLIANCE

No.: UKCA LVD GZES2511022156HS
Applicant: Guangdong Galanz Enterprises Co., Ltd.
25 South Ronggui Avenue, Ronggui Street, Shunde District,
Foshan, Guangdong, China
Manufacturer: Guangdong Galanz Appliances Manufacturing Co., Ltd.
3 East Xingpu Avenue, Maxin Industrial Zone, Huangpu Town,
Zhongshan, Guangdong, China
Product Name: Commercial Microwave Oven
Product Description: Commercial Microwave Oven
Model No.: P110M25AL-5S, P110M25ASL-5S
Trade Mark: **Galanz**
Rating: 230 V – 240 V, 50 Hz, 1600 W,
Microwave output: 1100 W, 2450 MHz
Protection against Electric Shock: Class I
Additional Information: -
Sufficient samples of the product have been tested and found to be in conformity with
Test Standard: EN IEC 60335-2-90: 2021 + A1: 2021
EN 60335-1: 2012 + A11: 2014 + A13: 2017 + A1: 2019 + A14:
2019 + A2: 2019 + A15: 2021 + A16: 2023
EN 62233: 2008
as shown in the
Test Report Number(s): GZES251102215601

This Verification of Compliance has been granted to the applicant based on the results of tests, performed by Laboratory of SGS-CSTC Standards Technical Services Co., Ltd. on sample of the above-mentioned product in accordance with the provisions of the relevant designated standards under UK Legislation - Electrical Equipment (Safety) Regulations 2016. The UKCA marking as shown below can be affixed, under the responsibility of the manufacturer, after completion of a UK Declaration of Conformity and compliance with all relevant UK Legislations.

UK
CA
David Guo

Technical Manager

SGS-CSTC Standards Technical Services Co., Ltd.

2025-12-29

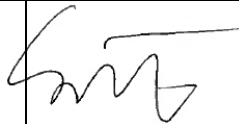
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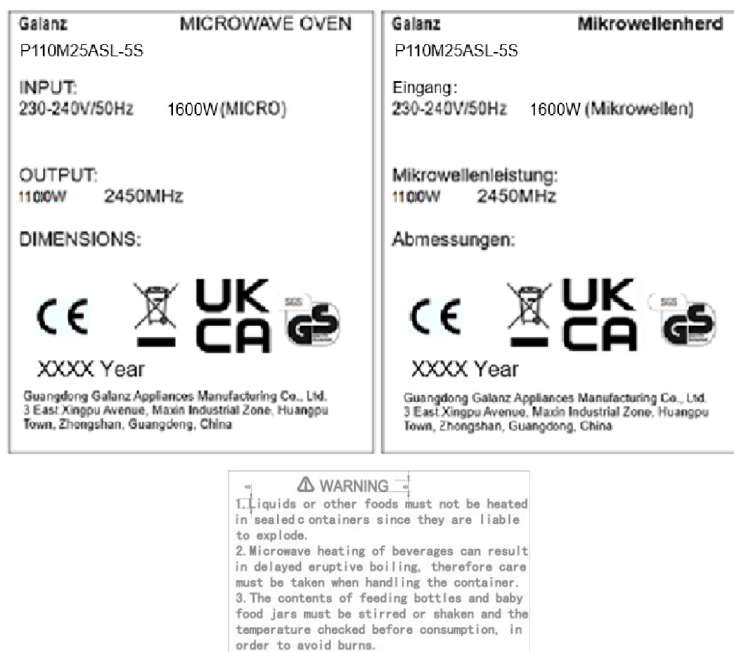
TEST REPORT IEC 60335-2-90 Safety of household and similar electrical appliances Part-2-90: Particular requirements for commercial microwave ovens	
Report Number.	GZES251102215601
Date of issue.	2025-12-11
Total number of pages	122
Name of Testing Laboratory preparing the Report	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch
Applicant's name	Guangdong Galanz Enterprises Co., Ltd.
Address	25 South Ronggui Avenue, Ronggui Street, Shunde District, Foshan, Guangdong, China
Test specification:	
Standard	IEC 60335-2-90:2015, AMD1:2019 in conjunction with IEC 60335-1:2010, AMD1:2013, AMD2:2016
Test procedure	SGS GS Procedure
Non-standard test method	N/A
Test Report Form No.	IEC60335_2_90J
Test Report Form(s) Originator	VDE Testing and Certification Institute
Master TRF	Dated 2020-03-13
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General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test item description..... :	Commercial Microwave Oven	
Trade Mark(s)..... :	Galanz	
Manufacturer..... :	Guangdong Galanz Appliances Manufacturing Co., Ltd. 3 East Xingpu Avenue, Maxin Industrial Zone, Huangpu Town, Zhongshan, Guangdong, China	
Model/Type reference..... :	P110M25AL-5S, P110M25ASL-5S	
Ratings..... :	230 V – 240 V, 50 Hz, 1600 W, Class I, Microwave output: 1100 W, 2450 MHz	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	CB Testing Laboratory:	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch
Testing location/ address.....:		Building 1, European Industrial Park, No.1, Shunhe South Road, Wusha, Daliang, Shunde District, Foshan, Guangdong, China
Tested by (name, function, signature).....:		Scott Huang / Project Engineer 
Approved by (name, function, signature)....:		Vincent Chan / Reviewer 
☐	Testing procedure: CTF Stage 1:	N/A
Testing location/ address.....:		
Tested by (name, function, signature).....:		
Approved by (name, function, signature)....:		
☐	Testing procedure: CTF Stage 2:	N/A
Testing location/ address.....:		
Tested by (name + signature)		
Witnessed by (name, function, signature)...		
Approved by (name, function, signature)....:		
☐	Testing procedure: CTF Stage 3:	N/A
☐	Testing procedure: CTF Stage 4:	N/A
Testing location/ address.....:		
Tested by (name, function, signature).....:		
Witnessed by (name, function, signature)...		
Approved by (name, function, signature)....:		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): Attachment 1 including 17 pages of EU group difference, national difference and EMF; Attachment 2 including 15 pages of EN 60335-1: 2012 / A16: 2023; Attachment 3 including 11 pages of Photo document; Attachment 4 including 2 pages of Circuit diagram.	
Summary of testing:	
Tests performed (name of test and test clause): IEC 60335-2-90: 2015 + A1: 2019 IEC 60335-1: 2010 + A1: 2013 + A2: 2016 Full tests were done on model P110M25ASL-5S. The submitted samples fulfil the requirements of specified standards.	Testing location: SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch Building 1, European Industrial Park, No.1, Shunhe South Road, Wusha, Daliang, Shunde District, Foshan, Guangdong, China
Summary of compliance with National Differences (List of countries addressed): EU group difference, DE, GB GB= United Kingdom, DE=Germany EK decisions according to German ProdSG have been taken into account. PAH risk evaluation according to AfPS GS 2019:01 PAK. ☒ The product fulfils the requirements of: EN IEC 60335-2-90: 2021 + A1: 2021 EN 60335-1: 2012 + A11: 2014 + A13: 2017 + A1: 2019 + A14: 2019 + A2: 2019 + A15: 2021 + A16: 2023 EN 62233: 2008	
Statement concerning the uncertainty of the measurement systems used for the tests (may be required by the product standard or client)	
☐ Internal procedure used for type testing through which traceability of the measuring uncertainty has been established: Procedure number, issue date and title: Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.	
☒ Statement not required by the standard used for type testing (Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)	

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

**Remark:**

The label for model P110M25AL-5S was same as model P110M25ASL-5S except for model number. As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

Marking on the packaging or in a document accompanying the electrical equipment is only acceptable if it is not possible to place such markings on the product.

The Height of CE logo shall not be less than 5 mm; Height of WEEE logo shall not be less than 7 mm.

As declared by the applicant the authorized EEA representative or importer was not decided at the time of application, but will be marked on the products before placing them on the market

According to ProdSG Art. 6 when placing the products on the market the authorized representative / importer within the European Economic Area (EEA) must be marked on the product if the manufacturer is not located within the EEA. Marking on the packaging is only acceptable if it is not possible to place such markings on the product.

Test item particulars	
Classification of installation and use..... : Portable appliance and commercial use	
Supply Connection : Non-detachable cord fitted with a plug	
Possible test case verdicts:	
- test case does not apply to the test object..... : N/A	
- test object does meet the requirement..... : P (Pass)	
- test object does not meet the requirement..... : F (Fail)	
Testing	
Date of receipt of test item..... : 2025-11-25	
Date (s) of performance of tests : 2025-11-25 to 2025-12-11	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a ☒ comma / ☐ point is used as the decimal separator. This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60335-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....	Guangdong Galanz Appliances Manufacturing Co., Ltd. 3 East Xingpu Avenue, Maxin Industrial Zone, Huangpu Town, Zhongshan, Guangdong, China

General product information and other remarks:

The appliance is intended for commercial and indoor use only.

Model P110M25ASL-5S was same as model P110M25AL-5S except for the type of cavity, P110M25AL-5S with painted steel cavity, P110M25ASL-5S with stainless steel cavity.

For relevant test, see 'summary of test'.

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		--
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.		P
5.3	Instead of carrying out the tests in the order of clauses, the following sequence of clauses and subclauses applies: 32, 22.113, 22.108, 22.116, 7 to 17, 20, 21 (except 21.101 to 21.105), 18, 19 (except 19.104), 22 (except 22.108, 22.113 and 22.116), 23 to 31, 21.101 to 21.105 and 19.104. (IEC 60335-2-90:2015)		P
5.101	Microwave ovens tested as motor-operated appliances (IEC 60335-2-90:2015)		P
5.102	Class III temperature-sensing probes only subjected to tests of clause 22.112 (IEC 60335-2-90:2015)		N/A
6	CLASSIFICATION		--
6.1	Microwave ovens be class I (IEC 60335-2-90:2015)		P
	For a class III construction with a detachable power supply part the appliance is classified according to the detachable power supply part		N/A
6.2	Protection against harmful ingress of water	IPX0	N/A
7	MARKING AND INSTRUCTIONS		--
7.1	Rated voltage or voltage range (V)	230 V – 240 V	P
	Symbol for nature of supply, or		N/A
	Rated frequency (Hz)	50 Hz	P
	Rated power input (W), or.....	1600 W	P
	Rated current (A)		N/A
	Nominal frequency (MHz) of ISM band in which they operate (IEC 60335-2-90:2015).....	2450 MHz	P
	Manufacturer's or responsible vendor's name, trademark or identification mark.....	Galanz	P
	Model or type reference.....	P110M25AL-5S, P110M25ASL-5S	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0		N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only, or		N/A
	for appliances powered by rechargeable batteries recharged in the appliance		N/A
	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		N/A

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage		N/A
	Required warning "Warning: Microwave energy - Do not remove this cover" for any cover, as specified (IEC 60335-2-90:2015)		P
	Appliances with external enclosures, other than working surfaces, that cannot meet the limit in Table 3 specified for external enclosures of motor-operated appliances, marked with symbol IEC 60417-5041(2002-10) or with the substance of the following: CAUTION: Hot surface (IEC 60335-2-90:2015)		N/A
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		P
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages or rated frequencies, the voltage or the frequency setting is clearly discernible		N/A
	Requirement met if frequent changes are not required and the rated voltage or rated frequency to which the appliance is to be adjusted is determined from a wiring diagram		N/A
7.5	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 or current are related to the arithmetic mean value of the rated voltage range		P
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		N/A
	Symbol for class II appliances placed unlikely to be confused with other marking		N/A
	Units of physical quantities and their symbols according to international standardized system		P

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N/A
	correct mode of connection is obvious		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		--
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking 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	Detail sees photo document	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
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	The instructions state that:		--
	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction		P
	- children being supervised not to play with the appliance		P
	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

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	Instructions include substance of following (IEC 60335-2-90:2015)		--
	- WARNING: If the door or door seals are damaged, the oven must not be operated until it has been repaired by a competent person (IEC 60335-2-90:2015);		P
	- WARNING: It is hazardous for anyone other than a competent person to carry out any service or repair operation that involves the removal of any cover which gives protection against exposure to microwave energy (IEC 60335-2-90:2015);		P
	- WARNING: Liquids or other foods must not be heated in sealed containers since they are liable to explode (IEC 60335-2-90:2015);		P
	- WARNING: Microwave heating of beverages can result in delayed eruptive boiling, therefore care must be taken when handling the container (IEC 60335-2-90:2015);		P
	- WARNING: The contents of feeding bottles and baby food jars must be stirred or shaken and the temperature checked before consumption, in order to avoid burns (IEC 60335-2-90:2015);		P
	- the minimum height of free space necessary above the top surface of the oven (IEC 60335-2-90:2015);		P
	- only use utensils that are suitable for use in microwave ovens (IEC 60335-2-90:2015);		P
	- when heating food in plastic or paper containers, keep an eye on the oven due to the possibility of ignition (IEC 60335-2-90:2015);		P
	- if smoke is observed, switch off or unplug the appliance and keep the door closed in order to stifle any flames (IEC 60335-2-90 (ed.3));		P
	- eggs in their shell and whole hard-boiled eggs should not be heated in microwave ovens since they may explode even after microwave heating has ended (IEC 60335-2-90:2015);		P
	- details for cleaning door seals, cavities and adjacent parts (IEC 60335-2-90:2015);		P
	- the oven should be cleaned regularly and any food deposits removed (IEC 60335-2-90:2015);		P

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
	- failure to maintain the oven in a clean condition could lead to deterioration of the surface that could adversely affect the life of the appliance and possibly result in a hazardous situation (IEC 60335-2-90:2015);		P
	- only use the temperature probe recommended for this oven (for appliances having a facility to use a temperature-sensing probe (IEC 60335-2-90:2015);		N/A
	- the appliance should not be cleaned with a water jet (for appliances intended to stand on the floor and which are not at least IPX5) (IEC 60335-2-90:2015);		P
	- statement on usage on commercial road vehicles (for appliances intended to be used on commercial road vehicles) (IEC 60335-2-90:2015);		N/A
	- the appliance must not be cleaned with a steam cleaner (for appliances which are not at least IPX5) (IEC 60335-2-90:2015);		P
7.12.1	Sufficient details for installation supplied		N/A
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		N/A
	If different rated voltages or different rated frequencies are marked, the instructions state what action to be taken to adjust the appliance		N/A
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		N/A
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		--
	- dimensions of space		N/A
	- dimensions and position of supporting and fixing		N/A
	- minimum distances between parts and surrounding structure		N/A
	- minimum dimensions of ventilating openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	a switch complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		--
	- max. inlet water pressure (Pa)		N/A
	- min. inlet water pressure, if necessary (Pa)		N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.12.9	Instructions specified in 7.12 and from 7.12.1 to 7.12.8 appear together before any other instructions supplied with the appliance		P
	These instructions may be supplied with the appliance separately from any functional use booklet		P
	They may follow the description of the appliance that identifies parts, or follow the drawings/sketches		N/A
	In addition, instructions are also available in an alternative format such as on a website or on request from the user in a format such as a DVD		P
	In addition, instructions are also available in an alternative format such as on a website or in a format such as a DVD	Website	P
7.13	Instructions and other texts in an official language	English and German	P
7.14	Markings clearly legible and durable:		--
	Signal words WARNING, CAUTION, DANGER in uppercase having a height as specified		P
	Uppercase letter of the text explaining the signal word not smaller than 1,6 mm		N/A
	Moulded in, engraved, or stamped markings either raised above or have a depth below the surface of at least 0,25 mm, unless		P
	contrasting colours are used		N/A
	Markings checked by inspection, measurement and rubbing test as specified		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Warning specified in (IEC 60335-2-90:2015):		--
	- clause 7.1, lettering at least 3 mm high (IEC 60335-2-90:2015)	3 mm	P
	- clause 7.101, lettering at least 5 mm high (IEC 60335-2-90:2015)	5 mm	P
	Height of the triangle used with symbol IEC 60417-5041 (2002-10) be at least 12 mm. (IEC 60335-2-90:2015)		N/A
7.15	Markings on a main part		--
	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		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
	The symbol IEC 60417-5018 placed next to the symbol IEC 60417-5172 or IEC 60417-5180		N/A
	Marking specified for hot surfaces is visible when the appliance is operated as in normal use, including when actuating any switch, adjusting any control or opening a lid or door. (IEC 60335-2-90:2015)		N/A
	Not be placed on a hot functional surface. (IEC 60335-2-90:2015)		N/A
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N/A
7.101	Label provided, together with instructions for fixing it in a conspicuous place close to appliance (IEC 60335-2-90:2015)		P
	Label state substance of following (IEC 60335-2-90:2015):		--
	- WARNING: Liquids or other foods must not be heated in sealed containers since they are liable to explode (IEC 60335-2-90:2015);		P
	- WARNING: Microwave heating of beverages can result in delayed eruptive boiling, therefore care must be taken when handling the container (IEC 60335-2-90:2015);		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- WARNING: The contents of feeding bottles and baby food jars must be stirred or shaken and the temperature checked before consumption, in order to avoid burns (IEC 60335-2-90:2015).		P
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		--
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20 N: no contact with live parts		P
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		P
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 or supporting parts		N/A
	For a single switching action obtained by a switching device, requirements as specified		N/A
	For appliances with a supply cord and without a switching device, the single switching action may be obtained by the withdrawal of the plug		N/A
8.1.4	Accessible part not considered live if:		--
	- safety extra-low a.c. voltage: peak value not exceeding 42,4 V	12 V	P
	- safety extra-low d.c. voltage: not exceeding 42,4 V		N/A
	- or separated from live parts by protective impedance		N/A
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0,7 mA		N/A
	- for peak values over 42,4 V up to and including 450 V, capacitance not exceeding 0,1 μ F		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μ C		N/A
	- for peak values over 15 kV, the energy in the discharge not exceeding 350 mJ		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		--
	- built-in appliances		N/A
	- fixed appliances		N/A
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
9	STARTING OF MOTOR-OPERATED APPLIANCES		--
	Requirements and tests are specified in part 2 when necessary		N/A
10	POWER INPUT AND CURRENT		--
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1 ...:	(see appended table)	P
	If the power input varies throughout the operating cycle and the maximum value of the power input exceeds, by a factor greater than two, the arithmetic mean value of the power input occurring during a representative period, the power input is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the power input is the arithmetic mean value		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
11	HEATING		--
11.1	No excessive temperatures in normal use		P
11.2	The appliance is held, placed or fixed in position as described	The ceiling is placed at 20 cm above the oven, placed with their backs as near as possible to one of the walls of the test corner and away from the other wall	P
	Appliances, other than built-in appliances, positioned as specified for heating appliances (IEC 60335-2-90:2015)		P
	A ceiling is placed over appliance at minimum height stated in instructions (IEC 60335-2-90:2015)		P
	The ceiling has a depth of 300 mm from back wall of test corner and a length at least 150 mm in excess of width of appliance (IEC 60335-2-90:2015)		P
	Appliances intended to be fixed to the floor (IEC 60335-2-90:2015), and		N/A
	appliances with a mass greater than 40 kg and not provided with rollers, castors or similar means (IEC 60335-2-90:2015)		N/A
	installed in accordance with installation instructions (IEC 60335-2-90:2015)		N/A
	If no instructions supplied, these appliances placed on floor as near as possible to walls of test corner (IEC 60335-2-90:2015)		P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		P
	the windings are non-uniform or it is difficult to make the necessary connections	H.F. transformer winding	P
11.4	Heating appliances operated under normal operation at 1,15 times rated power input (W)		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0,94 and 1,06 times rated voltage (V)	1,06 x 240 V = 254,4 V	P
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0,94 and 1,06 times rated voltage (V)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
11.7	Appliances operated in cycles, each cycle consisting of a heating period of 4 min followed by a rest period of 1 min until steady conditions established. The last cycle does not include a rest period of 1 min. Boiled water is added to water load when half of water load has evaporated (IEC 60335-2-90:2015/AMD1:2019)		P
11.8	Temperature rises monitored continuously and not exceeding the values in table 3	(see appended table)	P
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of annex C are carried out		N/A
	Temperature rises of external surfaces only measured on surfaces not placed against wall and floor of test corner (IEC 60335-2-90:2015)		P
	No temperature rise limits for air-outlet grilles and for surfaces up to a distance of 25 mm from them (IEC 60335-2-90:2015)		P
	When the required values for external enclosures of motor-operated appliances are not met, the maximum temperature rise shall not be higher than two times the values indicated. (IEC 60335-2-90:2015)		N/A
	Sealing compound does not flow out		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		--
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1,15 times the rated power input (W).....		N/A
	Motor-operated appliances and combined appliances supplied at 1,06 times the rated voltage (V).....	1,06 x 240 V = 254,4 V	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		P
13.2	The leakage current is measured by means of the circuit described in figure 4 of IEC 60990:1999		P
	For class 0I appliances and class I appliances, except parts of class II construction, C may be replaced by a low impedance ammeter		P
	Leakage current measurements	(see appended table)	P

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Clause	Requirement + Test	Result - Remark	Verdict
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4.....:	(see appended table)	P
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		--
	Appliances withstand the transient over-voltages to which they may be subjected		N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6.....:		N/A
	No flashover during the test, unless		N/A
	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited		N/A
15	MOISTURE RESISTANCE		--
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance	IPX0	P
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529.....:		N/A
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		N/A
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N/A
15.2	Spillage of liquid does not affect the electrical insulation		P
	Spillage solution comprising water containing approximately 1 % NaCl and 0,6 % rinsing agent		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
	Overfilling test with additional amount of the solution, over a period of 1 min (l).....:		P
	A quantity of 0,5 l of the same spillage solution is poured steadily over the shelf over a period of 1 min. (IEC 60335-2-90:2015/AMD1:2019)		P
	If the shelf can collect spilled liquid, it is filled with the solution and a further 0,5 l is then added over a period of 1 min. (IEC 60335-2-90:2015/AMD1:2019)		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		P
	Humidity test for 48 h in a humidity cabinet	Temp.:25 °C, R.H.: 93%	P
	Reassembly of those parts that may have been removed		P
	The appliance withstands the tests of clause 16		P
15.101	Temperature-sensing probes constructed so that their insulation not affected by water (IEC 60335-2-90:2015)		N/A
	Probe is completely immersed in water containing approximately 1 % NaCl and having a temperature of 20 °C ± 5 °C. Solution is heated to boiling point in approximately 15 min. Probe is then removed from boiling solution and immersed in water having a temperature of 20 °C ± 5 °C for 30 min. (IEC 60335-2-90:2015/AMD1:2019)		N/A
	This procedure is carried out five times, after which probe is removed from the solution. All traces of liquid then removed from surface. (IEC 60335-2-90:2015/AMD1:2019)		N/A
	Probe withstand leakage current test of clause 16.2 (IEC 60335-2-90:2015)		N/A
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		--
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1,06 times rated voltage (V).....:	1,06 x 240 V = 254,4 V	P
	Three-phase appliances: test voltage 1,06 times rated voltage divided by $\sqrt{3}$ (V)		N/A
	Leakage current measurements	(see appended table)	P
	Limit values doubled if:		--
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		P
	With the radio interference filters disconnected, the leakage current do not exceed limits specified	(see appended table)	P
16.3	Electric strength tests according to table 7.....:	(see appended table)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified		P
	No breakdown during the tests		P
16.101	Windings of power transformer that supplies magnetron have adequate insulation (IEC 60335-2-90:2015)		P
16.101.1	Test of switch-mode power supply transformers (IEC 60335-2-90:2015):		--
	Insulation between primary and secondary windings subjected for 1 min to a voltage (V), 1,414 times peak value of secondary working voltage plus 750 V, with a minimum of 1250 V, of substantially sinusoidal waveform and having a frequency of 50 Hz or 60 Hz (IEC 60335-2-90:2015).....		N/A
	No breakdown between windings or (IEC 60335-2-90:2015)		N/A
	between adjacent turns of same winding (IEC 60335-2-90:2015)		N/A
16.101.2	Test of transformers (IEC 60335-2-90:2015):		--
	Twice working voltage induced in secondary winding by applying a sinusoidal voltage having a frequency higher than rated frequency to primary terminals (IEC 60335-2-90:2015)		P
	Duration of the test (IEC 60335-2-90:2015):		--
	- 60 s, for frequencies up to twice rated frequency, or (IEC 60335-2-90:2015)		N/A
	- 120 x rated frequency / tested frequency s, with a minimum of 15 s, for higher frequencies (IEC 60335-2-90:2015)	400 Hz, 15 s	P
	Maximum of one-third of test voltage is applied and is then rapidly increased without creating transients. At the end of test, voltage is decreased in a similar manner to approximately one-third of its full value before switching off (IEC 60335-2-90:2015)		P
	No breakdown between windings or (IEC 60335-2-90:2015)		P
	between adjacent turns of same winding (IEC 60335-2-90:2015)		P
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		--
	Tests not carried out on the power transformer supplies magnetron and its associated circuits, these being checked during tests of clause 19 (IEC 60335-2-90:2015)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use	(see appended table)	P
	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).....	254,4 V	P
	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		P
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
18	ENDURANCE		--
	Door system is constructed to withstand wear expected in normal use. (IEC 60335-2-90:2015)		P
	Tests specifications as stated (IEC 60335-2-90:2015)		P
	After tests microwave leakage not exceed limit specified in clause 32 and door system still function (IEC 60335-2-90:2015)	5,7 W/m ²	P
19	ABNORMAL OPERATION		--
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe		P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		N/A
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		N/A
	if applicable, to the test of 19.5		N/A
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		N/A
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		P
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		N/A
	until steady conditions are established		P
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A
	Compliance is checked by tests of clause 19.101 to 19.104, at rated voltage (IEC 60335-2-90:2015)		P
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).....:		N/A
19.3	Test of 19.2 repeated; test voltage (V), power input of 1,24 times rated power input (W):		N/A
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		N/A
19.5	Test of 19.4 repeated on class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath		N/A
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N/A
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N/A
	The working voltage of the PTC heating element is increased by 5 % and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1,5 times working voltage or until the PTC heating element ruptures (V).....:		N/A
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or		N/A
	locking moving parts of other appliances		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Test repeated with capacitors short-circuited one at a time, unless		N/A
	the capacitor is of class S2 or S3 of IEC 60252-1		N/A
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed		N/A
	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		P
	they comply with the conditions specified in 19.11.1		N/A
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		N/A
	restarting does not result in a hazard		P
	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		P

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Clause	Requirement + Test	Result - Remark	Verdict
	During and after each test the following is checked:		--
	- the temperature of the windings do not exceed the values specified in table 8		P
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		P
	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		P
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		P
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		P
	b) open circuit at the terminals of any component	(See appended table)	P
	c) short circuit of capacitors, unless	(See appended table)	P
	they comply with IEC 60384-14	(See appended table)	P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	(See appended table)	P
	This fault condition is not applied between the two circuits of an optocoupler		P
	e) failure of triacs in the diode mode	(See appended table)	P
	f) failure of microprocessors and integrated circuits		P
	g) failure of an electronic power switching device		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	Magnetron fault simulation, as specified (IEC 60335-2-90:2015)		--
	- open-circuiting of cathode to anode circuit (at 0,94 - 1,06 rated voltage) (IEC 60335-2-90:2015)		P
	- short-circuiting of cathode to anode circuit (at 0,94 - 1,06 rated voltage) (IEC 60335-2-90:2015)		P
	Filament of magnetron not short-circuited (IEC 60335-2-90:2015)		P
19.11.3	If the appliance incorporates a protective electronic circuit that operates to ensure compliance with clause 19, the appliance is tested as specified		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, at frequency ranges specified		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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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 60 s 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)	H.V. fuse: Rated current: 0,85 A; Measured: 4,0 A	P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9	(see appended table)	P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		--
	- basic insulation (V)	1000	P
	- supplementary insulation (V)	1750	P
	- reinforced insulation (V)	3000	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P

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Clause	Requirement + Test	Result - Remark	Verdict
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		--
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		--
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
	During the tests, the temperature of windings shall not exceed the values shown in Table 8. Only appliances that allow a preselected start time and those operating with a keep warm function are considered to be appliances operated until steady conditions are established. (IEC 60335-2-90:2015/AMD1:2019)		P
	During tests microwave leakage does not exceed 100 W/m ² measured in accordance with Clause 32 but with the load as specified for each subclause. (IEC 60335-2-90:2015)	1,6 W/m ²	P
	Appliance must comply with clause 32, if it can be operated after the tests (IEC 60335-2-90:2015)	1,4 W/m ²	P
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		N/A
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		N/A
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		N/A
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied		N/A
19.101	Appliance are operated with controls set at most unfavourable position and without a load in the cavity. (IEC 60335-2-90:2015)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Test duration	Until steady condition	P
	If microwave leakage exceeds 100 W/m ² , the following alternative measurement method shall be applied, which modifies the microwave leakage limit of 19.13. (IEC 60335-2-90:2015/AMD1:2019)		N/A
	In order to identify and mark all spots where peak values of microwave leakage exceed 100 W/m ² , the instrument antenna is moved again over the external surface of the appliance, particular attention being given to the door and its seals. (IEC 60335-2-90:2015/AMD1:2019)		N/A
	Leakage values of each such spot shall be recorded and the averaged leakage value of any spot over the most onerous 20 s shall not exceed 100 W/m ² . (IEC 60335-2-90:2015/AMD1:2019)		N/A
	Peak value does not exceed 500 W/m ² . (IEC 60335-2-90:2015/AMD1:2019)		N/A
19.102	Appliances are operated under normal operation with the timer or other controls that operate in normal use short-circuited. (IEC 60335-2-90:2015)	Until steady condition	P
	If the appliance is provided with more than one control, these are short-circuited in turn. These short-circuits are applied one at a time. (IEC 60335-2-90:2015/AMD1:2019)		N/A
19.103	Appliances are operated under normal operation and with any single-fault condition simulated that is likely to occur. (IEC 60335-2-90:2015)		P
	Controls are adjusted to their most unfavourable setting and the appliance is operated for the maximum time allowed by the timer or 90 min, whichever is shorter. (IEC 60335-2-90:2015)	90 mins	P
19.103	Examples of fault conditions are (IEC 60335-2-90:2015)		--
	- blocking of air openings in same plane (IEC 60335-2-90:2015);		P
	- locking rotor of motors if locked rotor torque is smaller than full load torque (IEC 60335-2-90:2015);		P
	- locking of moving parts (IEC 60335-2-90:2015)		P
19.104	Possible fire occurring in cavity contained within appliance (max. microwave power, most unfavourable settings, potato load as specified with steel wire, test termination 15 min after microwave generation has ceased or fire extinguished) (IEC 60335-2-90:2015)		P
	Test repeated on a second oven in case of not compliance (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	After test, if appliance is operable, clause 19.13 applies (IEC 60335-2-90:2015)		P
20	STABILITY AND MECHANICAL HAZARDS		--
20.1	Appliances having adequate stability		P
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		N/A
	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		P
	Protective enclosures, guards and similar parts are non-detachable, and		P
	have adequate mechanical strength		P
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure		P
	Not possible to touch dangerous moving parts with the test probe described		P
20.101	Appliance having doors with a horizontal hinge at their lower edge and on which a load is likely to be placed have adequate stability (IEC 60335-2-90:2015)	Side-hinged door	N/A
	Appliance is placed on a horizontal surface with the door open and a mass is gently placed on geometric centre of door (IEC 60335-2-90:2015)		N/A
	For appliances normally used on floor, mass is (IEC 60335-2-90:2015):		--
	- 23 kg for cavity doors, or mass that can be placed in oven in accordance with instructions, if this is higher (IEC 60335-2-90:2015)		N/A
	- 7 kg for other doors (IEC 60335-2-90:2015)		N/A
	For appliances normally used on a table, mass is (IEC 60335-2-90:2015):		--
	- 7 kg for stationary appliances (IEC 60335-2-90:2015/AMD1:2019)		N/A
	- 3,5 kg for portable appliances (IEC 60335-2-90:2015/AMD1:2019)		N/A
	Appliance not tilt (IEC 60335-2-90:2015)		N/A
21	MECHANICAL STRENGTH		--

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Clause	Requirement + Test	Result - Remark	Verdict
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J	(see appended table)	P
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm	See clause 29.3	P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
	Compliance is also checked by tests of clause 21.101 to 21.105 (IEC 60335-2-90:2015/AMD1:2019)		P
	During these tests, the appliance is rigidly supported, except for 21.102. (IEC 60335-2-90:2015/AMD1:2019)		P
21.101	Operating of door, as specified spring balance with spring constant of 1,05 N/mm (IEC 60335-2-90:2015)		P
	Opening operation: 25 times; force of 35 N (IEC 60335-2-90:2015)		P
	Opening operation for stationary ovens and ovens for building-in (IEC 60335-2-90:2015):		--
	- 25 times; force of 1,5 times force to open door or (IEC 60335-2-90:2015)		N/A
	- 65 N, whichever is greater (IEC 60335-2-90:2015)		N/A
	Closing operation: 50 times; force of 90 N (IEC 60335-2-90:2015)		P
	Appliance comply with clause 32 (IEC 60335-2-90:2015)	1,5 W/m ² (limit: 50 W/m ²)	P
21.102	Hinged door test, as specified (IEC 60335-2-90:2015):		--
	- Side-hinged door: 10 times; applied force (N): max. 140 N (IEC 60335-2-90:2015)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- Bottom-hinged door: 15 min; applied force (N): max. 140 N (IEC 60335-2-90:2015)		N/A
	Appliance comply with clause 32 (IEC 60335-2-90:2015)	1,3 W/m ² (limit: 50 W/m ²)	P
21.103	Hinged door: wooden cube test on each corner as specified (force of 90 N for 5 s) (IEC 60335-2-90:2015)		P
	Appliance comply with clause 32 (IEC 60335-2-90:2015)	1,4 W/m ² (limit: 50 W/m ²)	P
21.104	Steel ball test of cavity door, as specified (steel ball of 50 mm diameter and 0,5 kg) (IEC 60335-2-90:2015)		P
	Each 3 impacts outside, inside and on seal surface (IEC 60335-2-90:2015)		P
	Bottom-hinged door: 3 more impacts on door seal at different locations (IEC 60335-2-90:2015)		N/A
	Appliance comply with clause 32 (IEC 60335-2-90:2015)	1,6 W/m ² (limit: 50 W/m ²)	P
21.105	Dowel test of bottom-hinged door, as specified (hardwood dowel) of 10 mm and 300 mm length, 140 N for 5 s, test made with dowel on each side and at centre of bottom edge) (IEC 60335-2-90:2015)		N/A
	Microwave leakage measured under conditions specified in clause 32 and not exceed 100 W/m ² (IEC 60335-2-90:2015)		N/A
22	CONSTRUCTION		--
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IPX0	P
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		N/A
	- an appliance inlet		N/A
	Single-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Applied torque not exceeding 0,25 Nm		N/A
	Pull force of 50 N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1 mm		N/A
	Each pin subjected to a torque of 0,4 Nm; the pins are not rotating, unless		N/A
	rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		P
22.5	No risk of electric shock when touching pins, for appliances having a capacitor with rated capacitance equal to or greater than 0,1 μ F, the appliance being disconnected from the supply at the instant of voltage peak		P
	Voltage not exceeding 34 V (V)	4 V	P
	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		P
	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
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described	Enclosure, control panel	P
22.12	Handles, knobs etc. fixed in a reliable manner, if loosening result in a hazard		P
	Removing or fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible, if resulting in a hazard		N/A
	A choking hazard does not apply to appliances for commercial use		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		P
	If the part is removed and can be contained within the small parts cylinder, it is considered to be a choking hazard		N/A
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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		N/A
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		N/A
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	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, or		P
	unearthed metal parts separated from live parts by basic insulation only		N/A
	Electrodes not used for heating liquids		--
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		P
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances 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		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N/A
	they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		P
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
	Resistors checked by the test of 14.1 a) in IEC 60065		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		N/A
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		N/A
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		N/A
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
22.55	Devices operated to stop the intended function of the appliance, if any, are be distinguished from other manual devices by means of shape, size, surface texture or position		P
	The requirement concerning position does not preclude use of a push on push off switch		N/A
	An indication when the device has been operated is given by:		--
	- tactile feedback from the actuator or from the appliance, or		N/A
	- reduction in heat output; or		N/A
	- audible and visible feedback		P
22.56	Detachable power supply part provided with the part of class III construction		N/A
22.57	The properties of non-metallic materials do not degrade from exposure to UV-C radiation, as specified in annex T		N/A
	This requirement does not apply to glass, ceramics or similar materials		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22.101	Appliance for building-in: venting through front unless (IEC 60335-2-90:2015)		N/A
	provisions made for venting through a duct (IEC 60335-2-90:2015)		N/A
22.102	Oven vents are constructed so that any moisture or grease discharged through them cannot affect clearances and creepage distances and clearances between live parts and other parts of the appliance. (IEC 60335-2-90:2015/AMD1:2019)		P
22.103	Appliances are constructed in compliance with either 22.103.1 or 22.103.2. (IEC 60335-2-90:2015)		P
22.103.1	Appliances incorporate at least two door interlocks that are operated by opening the door (IEC 60335-2-90:2015)		P
	one being a monitored door interlock (IEC 60335-2-90:2015)		P
	At least one of the door interlocks be concealed and not operable by manipulation. (IEC 60335-2-90:2015)		P
22.103.2	Appliances incorporate two independent monitored door interlocks that are operated by opening the door. In this case, 22.105 is not applicable. (IEC 60335-2-90:2015)		N/A
	Compliance is tested as specified (IEC 60335-2-90:2015)		N/A
	During the tests, the operation of the magnetron not be possible. (IEC 60335-2-90:2015)		N/A
22.104	At least one door interlock of 22.103.1 and both monitored door interlocks of 22.103.2 incorporate a switch that disconnects the microwave generator or its supply main circuit. (IEC 60335-2-90:2015)		P
22.105	At least one door interlock concealed and not operable by manipulation (IEC 60335-2-90:2015)		P
	This interlock operates before any other accessible interlock can be defeated (IEC 60335-2-90:2015)		P
	Compliance is tested as specified (IEC 60335-2-90:2015)		P
	It is not possible to operate the concealed door interlock during the tests. (IEC 60335-2-90:2015)		P
22.106	Supervision device of each monitored door interlock shall render the appliance inoperable if its switching part fails to control the microwave generator. (IEC 60335-2-90:2015/AMD1:2019)		P

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
	Switching part of monitored door interlock inoperative, rated voltage, supply source with short-circuit capacity of 1,5 kA for appliances with rated voltage > 150 V, and (IEC 60335-2-90:2015)		P
	1,0 kA for other appliances (IEC 60335-2-90:2015)		N/A
	Appliance operated with closed door, then door is opened in normal way - door cannot be opened, - or microwave generator shuts down and remains inoperable Supervision device not fail in open-circuit position (IEC 60335-2-90:2015)		P
	Supervision device not fail in open-circuit position (IEC 60335-2-90:2015)		P
	If an internal fuse ruptures: 2 additional tests. The fuse shall rupture each time (IEC 60335-2-90:2015)		P
	3 additional tests with an impedance of $(0,4 + j 0,25) \Omega$ in series with supply source. Fuse rupture each time (IEC 60335-2-90:2015)		P
22.107	Failure of any single component affecting operation of a door interlock does not cause any other interlock or the supervision device of the monitored door interlock to become inoperative, unless (IEC 60335-2-90:2015)		P
	appliance is rendered inoperative (IEC 60335-2-90:2015)		P
22.108	Door interlocks incorporated to comply with clause 22.103 operate before undue microwave leakage occurs (IEC 60335-2-90:2015)		P
	All door interlocks except one are rendered inoperative: rated voltage, with a load specified in clause 32, door opening sequence in small steps during which microwave leakage is measured. Appliance comply with clause 32 (IEC 60335-2-90:2015)		P
	Test is repeated on each door interlock in turn (IEC 60335-2-90:2015)	2,1 W/m ² (limit: 50 W/m ²)	P
22.109	No undue microwave leakage by thin material introduced between door and mating surface. Test on 10 different locations (IEC 60335-2-90:2015)	1,2 W/m ² (limit: 50 W/m ²)	P
22.110	Door seal contamination by cooking oil does not cause undue microwave leakage; test of clause 32 in conditions as specified (IEC 60335-2-90:2015)	1,5 W/m ² (limit: 50 W/m ²)	P
22.111	No undue microwave leakage if door corners subjected to mechanical distortion of max. 40 N (IEC 60335-2-90:2015)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Microwave leakage is measured under the conditions specified in clause 32 and not exceed 100 W/m ² (IEC 60335-2-90:2015)	1,4 W/m ² (limit: 50 W/m ²)	P
	Appliance comply with clause 32 (IEC 60335-2-90:2015)	1,4 W/m ² (limit: 50 W/m ²)	P
22.112	Microwave oven with temperature-sensing probe (IEC 60335-2-90:2015)		N/A
	Load specified in clause 32 is placed in oven and probe is connected as in normal use, sensing part or cord are in the most unfavourable position which can occur (IEC 60335-2-90:2015)		N/A
	Door is then closed against the sensing part of the cord with a force of 90 N for 5 s in most unfavourable place (IEC 60335-2-90:2015)		N/A
	The force is then released and, if the oven can be operated with the temperature-sensing probe still being placed in the trapped position, the microwave leakage is measured under the conditions specified in Clause 32 and ≤ 100 W/m ² . (IEC 60335-2-90:2015/AMD1:2019)		N/A
	After this test, appliance comply with clause 32, temperature-sensing probe shall comply with 8.1, 15.101, 29.1 (IEC 60335-2-90:2015)		N/A
22.113	No undue microwave leakage when detachable parts removed (IEC 60335-2-90:2015)		N/A
	Detachable parts are removed, except shelves, unless a horizontal surface greater than 85 mm in diameter is available (IEC 60335-2-90:2015)		N/A
	Appliance comply with clause 32, load is placed on horizontal surface as close as possible to centre of cavity (IEC 60335-2-90:2015)		N/A
22.114	Appliance constructed so that shelves do not fall out of their supports when subjected to a load (IEC 60335-2-90:2015)		P
	Shelves intended to be partially withdrawn in use not tip when they have partially been removed from oven (IEC 60335-2-90:2015)		P
	During test shelf not fall away from its support (IEC 60335-2-90:2015)		P
	For shelves intended to be partially withdrawn in use, test repeated with shelf pulled out by 50 % of its depth. An additional force of 10 N applied vertically downwards on centre of exposed front edge on shelf (IEC 60335-2-90:2015)		P
	During test shelf not tip (IEC 60335-2-90:2015)		P

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Clause	Requirement + Test	Result - Remark	Verdict
22.115	A single fault such as a failure of basic insulation or a loose wire bridging insulation system not allow operation of microwave generator with door open (IEC 60335-2-90:2015)		P
22.116	No access to cavity through viewing screen with a steel rod of 1 mm diameter with a force of 2 N (IEC 60335-2-90:2015)		P
22.117	Where interlocks are required to comply with this standard and are operated by detachable parts, they shall be guarded so that accidental operation is prevented. (IEC 60335-2-90:2015/AMD1:2019)		N/A
22.118	Lights, switches or push-buttons for the indication of danger, alarm or similar situations shall be coloured red. (IEC 60335-2-90:2015/AMD1:2019)		N/A
22.119	If electronic circuits are used to provide protection against microwave leakage they designed so that a fault condition not affects protection against microwave leakage. (IEC 60335-2-90:2015)		N/A
	Compliance is checked by applying the tests in Clause 19 in conjunction with the requirements and test specifications in 22.105, 22.106, 22.107 and 22.108. (IEC 60335-2-90:2015)		N/A
22.120	Appliances for installing in commercial road vehicles, coaches, busses, food stalls and similar vehicles withstand the vibrations to which they may be subjected. (IEC 60335-2-90:2015)		N/A
	Compliance is checked by carrying out the vibration tests specified in IEC 60068-2-6 under the conditions as described. (IEC 60335-2-90:2015)		N/A
	Appliance shows no damage that could impair compliance with 8.1, 16.3 and Clauses 29 and 32, and connections not have worked loose. (IEC 60335-2-90:2015)		N/A
22.121	For appliances that are controlled by programmable electronic circuits that limit the number of heating elements and motors from being energised at the same time, simultaneous activation of any combination of heating elements and motors shall not render the appliance unsafe. (IEC 60335-2-90:2015/AMD1:2019)		N/A
	Compliance is checked as follows: (IEC 60335-2-90:2015/AMD1:2019)		--
	- the fault/error conditions specified in Table R.1 are applied and evaluated in accordance with the relevant requirements of Annex R; or. (IEC 60335-2-90:2015/AMD1:2019)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- the appliance is operated under conditions of Clause 11 while being supplied at rated voltage, the programmable electronic circuits being modified to allow simultaneous activation of all heaters and motors under their control. (IEC 60335-2-90:2015/AMD1:2019)		N/A
23	INTERNAL WIRING		--
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well-rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		P
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges		N/A
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		N/A
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	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 15 W		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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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		P
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	Not aluminium wire used.	N/A
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
24	COMPONENTS		--
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components:	(see appended table)	P
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		P
	Relays tested as part of the appliance, or		P
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		P
	The requirements of clause 29 apply between live parts of components and accessible parts of the appliance		P
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard		P

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Clause	Requirement + Test	Result - Remark	Verdict
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections		P
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2		P
	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		P
	If these conditions are not satisfied, the component is tested as part of the appliance.		P
	Power electronic converter circuits not required to comply with IEC 62477-1, they are tested as part of the appliance		N/A
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		P
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		P
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		P
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, comply with IEC 60384-14		P
	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		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Safety isolating transformers comply 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 comply with IEC 61058-1, the number of cycles of operation being at least 10 000		P
	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 comply with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		--
	- thermostats:.....30 000 (IEC 60335-2-90:2015)		N/A
	- temperature limiters:.....1 000		N/A
	- self-resetting thermal cut-outs:.....300		P
	- voltage maintained non-self-resetting thermal cut-outs:1 000		N/A
	- other non-self-resetting thermal cut-outs:.....30		N/A
	- timers:.....3 000		N/A
	- energy regulators:10 000		N/A
	- door interlocks (IEC 60335-2-90:2015): ...50 000		P
	interlocks only operated during user maintenance Test made on 6 samples (IEC 60335-2-90:2015):.....5 000		N/A
	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited		N/A
	Thermal motor protectors are tested in combination with their motor under the conditions specified in annex D		N/A
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A
	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9		N/A
24.1.5	Appliance couplers comply with IEC 60320-1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	However, for class II appliances classified higher than IPX0, the appliance couplers comply with IEC 60320-2-3		N/A
	Interconnection couplers comply with IEC 60320-2-2		N/A
24.1.6	Small lamp holders similar to E10 lampholders comply with IEC 60238, the requirements for E10 lampholders being applicable		P
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691		N/A
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		P
	They are also tested in accordance with clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance		P
24.2	Appliances not fitted with:		--
	- switches, automatic controls or power supplies in flexible cords		P
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	- thermal cut-outs that can be reset by soldering, unless		P
	the solder has a melting point of at least 230 °C		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N/A
	In addition, the motors comply with the requirements of annex I		N/A
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		N/A
	One or more of the following conditions are to be met:		--
	- the capacitors are of class S2 or S3 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	Incorporated socket-outlets: single-phase type, earthing contact, rated current ≤ 16 A (IEC 60335-2-90:2015)		N/A
	Both poles protected by fuse or miniature circuit breakers behind a non-detachable cover with rated current not exceeding (IEC 60335-2-90:2015):		--
	- 20 A, for rated voltage up to 130 V (IEC 60335-2-90:2015)		N/A
	- 10 A, for other appliances (IEC 60335-2-90:2015)		N/A
	Appliance for fixed wiring: not protected neutral possible (IEC 60335-2-90:2015)		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		--
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		--

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Clause	Requirement + Test	Result - Remark	Verdict
	- supply cord fitted with a plug, the current rating and voltage rating of the plug being not less than the corresponding ratings of its associated appliance		P
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or		N/A
	- pins for insertion into socket-outlets		N/A
	Appliance not provided with an appliance inlet (IEC 60335-2-90:2015)		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		N/A
	- a set of supply leads accommodated in a suitable compartment		N/A
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support		N/A
	Fixed appliances and appliances with a mass greater than 40 kg and not provided with rollers, castors or similar means constructed so that supply cord can be connected after appliance has been installed in accordance with installation instructions (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Terminals for permanent connection of cables to fixed wiring may also be suitable for a supply cord of type X attachment. In this case cord anchorage complying with clause 25.16 be fitted to appliance (IEC 60335-2-90:2015)		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm)		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29		N/A
25.5	Method for assembling the supply cord to the appliance:		--
	- type X attachment		N/A
	- type Y attachment		P
	- type Z attachment, if allowed in relevant part 2		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		--
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)	H05RN-F	P
	- polyvinyl chloride sheathed. Not used if they are likely to touch metal parts having a temperature rise exceeding 75 K during the test of clause 11		--
	- light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg		N/A
	- ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances		N/A
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		--
	- heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg		N/A
	- heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances		N/A
	- halogen-free, low smoke, thermoplastic insulated and sheathed		--
	- light duty halogen-free low smoke flexible cable (62821 IEC 101) for circular cable and (62821 IEC 101f) for flat cable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Ordinary duty halogen-free low smoke flexible cable (62821 IEC 102) for circular cable and (62821 IEC 102f) for flat cable		N/A
	Supply cords for class III appliances adequately insulated		N/A
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N/A
	Instead of types of supply cords specified, following applies (IEC 60335-2-90:2015):		--
	- supply cords be oil-resistant and not lighter than ordinary polychloroprene sheathed flexible cord (code designation 60245 IEC 57) or equivalent synthetic elastomer (IEC 60335-2-90:2015)		P
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm ²)	Calculated current: 7,52 A cross-sectional area: 3G 1,0 mm ² or 3G 0,75 mm ² Length < 2 m	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		N/A
	Where additional neutral conductors are provided in the supply cord:		--
	- other colours may be used for these additional neutral conductors;		N/A
	- all of the neutral conductors and line conductors are identified by marking using the alpha numeric notation specified in IEC 60445		N/A
	- the supply cord is fitted to the appliance		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		--
	- applied force (N).....:		N/A
	- number of flexings.....:		N/A
	The test does not result in:		--
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
	Temperature-sensing probes, total number of flexings is 5 000 (IEC 60335-2-90:2015)		N/A
	Probes with circular-section cords turned through 90° after 2 500 flexings (IEC 60335-2-90:2015)		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).....:		N/A
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm).....:	17,0 kg; Pull: 100 N; torque: 0,35 Nm	P
	Cord not damaged and max. 2 mm displacement of the cord	0,5 mm	P
25.16	Cord anchorages for type X attachments constructed and located so that:		--
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of supply cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	they are separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N/A
	it is part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N/A
	failure of the insulation of the cord does not make accessible metal parts live		N/A
	- for class II appliances they are of insulating material, or		N/A
	if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals		N/A
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	Type Y	P
25.18	Cord anchorages only accessible with the aid of a tool, or		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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:		--
	- 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
	- for class I or class II appliance with class III construction, the cross sectional areas of the conductors need not comply with 25.8 if specified conditions are met		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.		P
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		P
26	TERMINALS FOR EXTERNAL CONDUCTORS		--
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N/A

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

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Clause	Requirement + Test	Result - Remark	Verdict
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 ²)		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		N/A
	conductors ends fitted with means suitable for screw terminals		N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used		P
	For class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		N/A
27	PROVISION FOR EARTHING		--
27.1	Accessible metal parts of class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	protective extra-low voltage circuits		N/A
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2,5 to 6 mm ² , and		N/A
	- do not provide earthing continuity between different parts of the appliance, and		N/A
	- conductors cannot be loosened without the aid of a tool		N/A
	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 connection of an external equipotential bonding conductor (IEC 60335-2-90:2015)		P
	This terminal be in effective electrical contact with all fixed exposed metal parts and allow connection of a conductor having a nominal cross-sectional area up to 10 mm ² (IEC 60335-2-90:2015)		P
	It be located in a position convenient for connection of conductor after installation of appliance (IEC 60335-2-90:2015)		P
	Note 101: Small fixed exposed metal parts, for example nameplates, are not required to be in electrical contact with terminal (IEC 60335-2-90:2015)		N/A
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		N/A
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		P
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		N/A
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N/A
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω).....:	0,025 Ω	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
28	SCREWS AND CONNECTIONS		--
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		P
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		N/A
	For screws and nuts; torque-test as specified in table 14.....:	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless		P
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material		N/A
	This requirement does not apply to electrical connections in circuits of appliances for which:		--
	- 30.2.2 is applicable and that carry a current not exceeding 0,5 A		N/A
	- 30.2.3 is applicable and that carry a current not exceeding 0,2 A		N/A
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		N/A
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		P
	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,		P
	- during user maintenance,		P
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		P
	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or		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		N/A
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		--
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies.....:		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation.....:		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500 V and above are increased by 0,5 mm and the impulse voltage test is not applicable		N/A
	For appliances intended for use at altitudes exceeding 2 000 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, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- to appliances intended for use at altitudes exceeding 2 000 m		N/A
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings considered to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		P
29.1.4	Clearances for functional insulation are the largest values determined from:		--
	- table 16 based on the rated impulse voltage	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N/A
	the microenvironment is pollution degree 3, or		N/A
	the distances can be affected by wear, distortion, movement of the parts or during assembly		P
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		P
	Lacquered conductors of windings considered to be bare conductors		P

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Clause	Requirement + Test	Result - Remark	Verdict
	However, clearances at crossover points are not measured		N/A
	Clearance between surfaces of PTC heating elements may be reduced to 1 mm		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: H.V. transformer: working voltage: 2520 Vr.m.s. working voltage: 5040 Vp rated voltage: 240 Vr.m.s. required cl 6,0 mm / cr 25,0 mm Magnetron: working voltage: 2940 Vr.m.s. working voltage: 4480 Vp rated voltage: 240 Vr.m.s. required cl 6,0 mm / cr 25,0 mm		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 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

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Clause	Requirement + Test	Result - Remark	Verdict
	Pollution degree 2 applies, unless		P
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- insulation subjected to conductive pollution; pollution degree 3		N/A
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14.....		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		P
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		--

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Clause	Requirement + Test	Result - Remark	Verdict
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		P
	- 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	Opto-coupler	P
	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	Thickness of control panel: 2,8 mm	P
	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		P
	Supplementary insulation consist of at least 2 layers		N/A
	Reinforced insulation consist of at least 3 layers		P
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		P
	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		P
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19.....:		N/A
30	RESISTANCE TO HEAT AND FIRE		--
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	parts of thermoplastic material providing supplementary or reinforced insulation		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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 30.1)	P
	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 30.1)	P
	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)		N/A
30.2	Parts of non-metallic material resistant to ignition and spread of fire		P
	This requirement does not apply to:		--
	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		P
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		N/A
	Compliance checked by the test of 30.2.1, and in addition:		P
	- for attended appliances, 30.2.2 applies		N/A
	- for unattended appliances, 30.2.3 applies		P
	For appliances for remote operation, 30.2.3 applies		N/A
	For base material of printed circuit boards, 30.2.4 applies		P
	If delayed start or keep-warm function, 30.2.3 is applicable (IEC 60335-2-90:2015)		P
	For other appliances, 30.2.2 applies (IEC 60335-2-90:2015)		N/A
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C	(see appended table 30.2)	P
	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 550 °C, or		N/A
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
30.2.2	Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and		N/A
	parts of non-metallic material within a distance of 3 mm of such connections,		N/A
	subjected to the glow-wire test of IEC 60695-2-11 with appropriate severity level:		N/A
	- 750 °C, for connections carrying a current exceeding 0,5 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	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:		--
	- 750 °C, for connections carrying a current exceeding 0,5 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 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
	Glow-wire test not applicable to conditions as specified.....		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.....		N/A
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	(see appended table 30.2)	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

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Clause	Requirement + Test	Result - Remark	Verdict
30.2.3.2	Parts of non-metallic material supporting connections, and		P
	parts of non-metallic material within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with appropriate severity level:	(see appended table 30.2)	P
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		P
	- 650 °C, for other connections		P
	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
	- 775 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 675 °C, for other connections		N/A
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:		N/A
	- 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	(See appended table)	P
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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	(see appended table 30.2/30.2.4)	P
	Test not applicable to conditions as specified		N/A
31	RESISTANCE TO RUSTING		--
	Relevant ferrous parts adequately protected against rusting		P
	Tests specified in part 2 when necessary		N/A
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		--
	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		P
	Test and measurement according to specifications (IEC 60335-2-90:2015)		P
	Appliance microwave leakage < 50 W/m ² (IEC 60335-2-90:2015)	0,9 W/m ²	P
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		--
	Description of routine tests to be carried out by the manufacturer		N/A
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES THAT ARE RECHARGED IN THE APPLIANCE		--
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Three forms of construction covered:		--
	a) Appliance supplied directly from the supply mains or a renewable energy source, the battery charging circuitry and other supply unit circuitry incorporated within the appliance		N/A
	b) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the part of the appliance containing the battery		N/A
	c) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the detachable supply unit		N/A
3.1.9	Appliance operated under the following conditions:		--
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A
	- if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	- if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage (V) and polarity of the terminals		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

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Clause	Requirement + Test	Result - Remark	Verdict
7.12	The instructions give information regarding charging		N/A
	Instructions for appliances incorporating batteries intended to be replaced by the user include required information		N/A
	Instructions for appliances containing non user-replaceable batteries state the substance of the following:		--
	This appliance contains batteries that are only replaceable by skilled persons		N/A
	Instructions for appliances containing non-replaceable batteries shall state the substance of the following:		--
	This appliance contains batteries that are non-replaceable		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
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.B.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19.B.102	For appliances having batteries that can be removed without the aid of a tool, short-circuit of the terminals of the battery, the battery being fully charged,		N/A
19.B.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N/A
19.13	The battery does not rupture or ignite		N/A
21.B.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being:		--
	- 100, if the mass of the part does not exceed 250 g (g)		N/A
	- 50, if the mass of the part exceeds 250 g.....		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts		N/A
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		--
	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
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		--
	Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard		N/A
	Test conditions as specified		N/A
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		--
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		--
7	Severities		--

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Clause	Requirement + Test	Result - Remark	Verdict
	The duration of application of the test flame is 30 s $\pm$ 1 s		P
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		P
9.2	The first paragraph does not apply		P
	If possible, the flame is applied at least 10 mm from a corner		P
9.3	The test is carried out on one specimen		P
	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		P
F	ANNEX F (NORMATIVE) CAPACITORS		--
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		--
	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		N/A
	- model or type reference.....		N/A
17	Overload protection of transformers and associated circuits		--
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		--
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N/A
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		N/A
	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances		N/A
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
H	ANNEX H (NORMATIVE) SWITCHES		--
	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		N/A
	Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		--
	Switches are not required to be marked		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		--
	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
19.1.101	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

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Clause	Requirement + Test	Result - Remark	Verdict
22	Construction		--
22.1.101	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	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		--
	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		--
	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
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		--
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	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		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		--
	Information for the determination of clearances and creepage distances		P
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		--
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		--
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	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		P
	- 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
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		--
	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		P
10	Determination of proof tracking index (PTI)		--
10.1	Procedure		--

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Clause	Requirement + Test	Result - Remark	Verdict
	The proof voltage is 100 V, 175 V, 400 V or 600 V:	175 V	P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25 V, 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
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF clause 30		--
	Description of tests for determination of resistance to heat and fire		P
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN TROPICAL CLIMATES		--
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a tropical climate and that are marked with symbol IEC 60417-6332		--
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a tropical climate and that are marked with symbol IEC 60417-6332, 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		N/A
7.1	The appliance marked with symbol IEC 60417-6332		N/A
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		N/A
	The instructions state that the appliance is considered to be suitable for use in countries having a tropical climate, but may also be used in other countries		N/A
	If symbol IEC 60417-6332 is used, its meaning is explained		N/A
11.8	The values of Table 3 are reduced by 15 K		N/A
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A
15.3	The value of t is 37 °C		N/A
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		N/A
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		--
	Description of tests for appliances incorporating electronic circuits		P
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		--
	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		N/A
R.1	Programmable electronic circuits using software		--
	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
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:		N/A
	The specification of the software safety requirements includes the descriptions listed		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict

TABLE R.1 ^e – GENERAL FAULT/ERROR CONDITIONS						
Component _a	Fault/error	Acceptable measures ^{b, c}	Definitions	Document reference for applied measure	Document reference for applied test	Verdict
1 CPU						N/A
1.1 Registers	Stuck at	Functional test, or periodic self-test using either: - static memory test, or - word protection with single bit redundancy	H.2.16.5 H.2.16.6 H.2.19.6 H.2.19.8.2			N/A
1.2 VOID						N/A
1.3 Programme counter	Stuck at	Functional test, or Periodic self-test, or Independent time-slot monitoring, or Logical monitoring of the programme sequence	H.2.16.5 H.2.16.6 H.2.18.10.4 H.2.18.10.2			N/A
2 Interrupt handling and execution	No interrupt or too frequent interrupt	Functional test, or time-slot monitoring	H.2.16.5 H.2.18.10.4			N/A
3 Clock	Wrong frequency (for quartz synchronized clock: harmonics/sub-harmonics only)	Frequency monitoring, or time slot monitoring	H.2.18.10.1 H.2.18.10.4			N/A
4. Memory						N/A
4.1 Invariable memory	All single bit faults	Periodic modified checksum, or multiple checksum, or word protection with single bit redundancy	H.2.19.3.1 H.2.19.3.2 H.2.19.8.2			N/A
4.2 Variable memory	DC fault	Periodic static memory test, or word protection with single bit redundancy	H.2.19.6 H.2.19.8.2			N/A

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4.3 Addressing (relevant to variable and invariable memory)	Stuck at	Word protection with single bit redundancy including the address	H.2.19.8.2			N/A
5 Internal data path	Stuck at	Word protection with single bit redundancy	H.2.19.8.2			N/A
5.1 VOID						N/A
5.2 Addressing	Wrong address	Word protection with single bit redundancy including the address	H.2.19.8.2			N/A
6 External communication	Hamming distance 3	Word protection with multi-bit redundancy, or CRC – single work, or Transfer redundancy, or Protocol test	H.2.19.8.1 H.2.19.4.1 H.2.18.2.2 H.2.18.14			N/A
6.1 VOID						N/A
6.2 VOID						N/A
6.3 Timing	Wrong point in time Wrong sequence	Time-slot monitoring, or scheduled transmission Time-slot and logical monitoring, or comparison of redundant communication channels by either: - reciprocal comparison - independent hardware comparator Logical monitoring, or time-slot monitoring, or Scheduled transmission	H.2.18.10.4 H.2.18.18 H.2.18.10.3 H.2.18.15 H.2.18.3 H.2.18.10.2 H.2.18.10.4 H.2.18.18			N/A
7 Input/output periphery	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			N/A
7.1 VOID						N/A
7.2 Analog I/O 7.2.1 A/D and D/A-converter	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			N/A

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Clause	Requirement + Test		Result - Remark			Verdict
7.2.2 Analog multiplexer	Wrong addressing	Plausibility check	H.2.18.13			N/A
8 VOID						N/A
9 Custom chips ^d e.g. ASIC, GAL, gate array	Any output outside the static and dynamic functional specification	Periodic self-test	H.2.16.6			N/A
NOTE A Stuck-at fault model denotes a fault model representing an open circuit or a non-varying signal level. A DC fault model denotes a stuck-at fault model incorporating short circuit between signal lines.						
^{a)} For fault/error assessment, some components are divided into their sub-functions. ^{b)} For each sub-function in the table, the Table R.2 measure will cover the software fault/error. ^{c)} Where more than one measure is given for a sub-function, these are alternatives. ^{d)} To be divided as necessary by the manufacturer into sub-functions. ^{e)} Table R.1 is applied according to the requirements of R.1 to R.2.2.9 inclusive.						

S	ANNEX S (NORMATIVE) BATTERY OPERATED APPLIANCES POWERED BY BATTERIES THAT ARE NON-RECHARGEABLE OR NOT RECHARGED IN THE APPLIANCE			--
	The following modifications to this standard are applicable for battery-operated appliances where the batteries are either non-rechargeable (primary batteries), or			N/A
	rechargeable batteries (secondary batteries) that are not recharged in the appliance			N/A
5.8.1	If the supply terminals for the connection of the battery have no indication of polarity, the more unfavourable polarity is applied			N/A
5.S.101	Appliances intended for use with a battery box are tested with the battery box supplied with the appliance or with the battery box recommended in the instructions			N/A
5.S.102	Appliances are tested as motor-operated appliances.			N/A
7.1	Appliances marked with the battery voltage (V) and the polarity of the terminals, unless..... :			N/A
	the polarity is irrelevant			N/A
	Appliances also marked with:			--
	- name, trade mark or identification mark of the manufacturer or responsible vendor..... :			N/A
	- model or type reference..... :			N/A
	- IP number according to degree of protection against ingress of water, other than IPX0..... :			N/A
	- type reference of battery or batteries :			N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If relevant, the positive terminal is indicated by the symbol IEC 60417-5005 and the negative terminal by the symbol IEC 60417-5006		N/A
	If appliances use more than one battery, they are marked to indicate correct polarity connection of the batteries		N/A
7.6	Additional symbols		N/A
7.12	The instructions contain the following, as applicable:		--
	- the types of batteries that may be used..... :		N/A
	- how to remove and insert the batteries		N/A
	- non-rechargeable batteries are not to be recharged		N/A
	- rechargeable batteries are to be removed from the appliance before being charged		N/A
	- different types of batteries or new and used batteries are not to be mixed		N/A
	- batteries are to be inserted with the correct polarity		N/A
	- exhausted batteries are to be removed from the appliance and safely disposed of		N/A
	- if the appliance is to be stored unused for a long period, the batteries are removed		N/A
	- the supply terminals are not to be short-circuited		N/A
11.5	Appliances are supplied with the most unfavourable supply voltage between		--
	- 0,55 and 1,0 times the battery voltage, if the appliance can be used with non-rechargeable batteries		N/A
	- 0,75 and 1,0 times battery voltage, if the appliance is designed for use with rechargeable batteries only		N/A
	The values specified in Table S.101 for the internal resistance per cell of the battery is taken into account		N/A
19.1	The tests are carried out with the battery fully charged unless otherwise specified		N/A
19.13	The battery does not rupture or ignite		N/A
19.S.101	Appliances are supplied with the voltage specified in 11.5. The supply terminals having an indication of polarity are connected to the opposite polarity, unless		N/A
	such a connection is unlikely to occur due to the construction of the appliance		N/A
19.S.102	For appliances with provision for multiple batteries, one or more of the batteries are reversed and the appliance is operated, if reversal of batteries is allowed by the construction		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
25.5	The flexible leads or flexible cord used to connect an external battery or battery box in is connected to the appliance by a type X attachment		N/A
25.13	This requirement is not applicable to the flexible leads or flexible cord connecting external batteries or a battery box with an appliance		N/A
25.S.101	Appliances have suitable means for connection of the battery. If the type of battery is marked on the appliance, the means of connection is suitable for this type of battery		N/A
26.5	Terminal devices in an appliance for the connection of the flexible leads or flexible cord connecting an external battery or battery box are so located or shielded that there is no risk of accidental connection between supply terminals		N/A
30.2.3.2	There is no battery in the area of the vertical cylinder used for the consequential needle flame test, unless		N/A
	the battery is shielded by a barrier that meets the needle flame test of annex E, or		N/A
	that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
T	ANNEX T (NORMATIVE) UV-C RADIATION EFFECT ON NON-METALLIC MATERIALS		--
	Requirements for non-metallic materials subject to direct or reflected UV-C radiation exposure and whose mechanical and electrical properties are relied upon for compliance with the		N/A
	Does not apply to glass, ceramic and similar materials		N/A
	Tested as specified in ISO 4892-1 and ISO 4892-2, with the following modifications:		--
	Modifications to ISO 4892-1:		--
5.1.6	The UV-C emitter is a low pressure mercury lamp with a quartz envelope having a continuous spectral irradiance of 10 W/m ² at 254 nm		N/A
	Subclause 5.1.6.1 and Table 1 are not applicable		N/A
5.2.4	The black-panel temperature shall be 63 °C +/- 3 °C		N/A
5.3.1	Humidification of the chamber air is specified in part 2 when necessary		N/A
9	This clause is not applicable		N/A
	Modifications to ISO 4892-2:		--
7.1	At least three test specimens are tested		N/A
	Ten samples of internal wiring is tested		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
7.2	The specimens are attached to the specimen holders such that they are not subject to any stress		N/A
7.3	Apparatus prepared as specified		N/A
	The test specimens and, if used, the irradiance-measuring instrument are exposed for 1 000 h		N/A
7.4	If used, a radiometer is mounted and calibrated such that it measures the irradiance at the exposed surface of the test specimen		N/A
7.5	Material properties and test methods for parts providing mechanical support or impact resistance as specified in Table T.1		N/A
	Material properties and test method for electrical insulation of internal wiring as specified in Table T.2		N/A
8	This clause is not applicable		N/A

AA	ANNEX AA (NORMATIVE) COMBINATION MICROWAVE OVENS (IEC 60335-2-90:2015)		--
	Following modifications to this standard applicable for combination microwave ovens (IEC 60335-2-90:2015)		--
AA.5	General conditions for the tests(IEC 60335-2-90:2015)		--
AA.5.101	Combination microwave ovens tested as combined appliances (IEC 60335-2-90:2015)		N/A
AA.11	Heating (IEC 60335-2-90:2015)		--
AA.11.101	Combination microwave ovens incorporating resistive heating elements where simultaneous operation is intended, operated with resistive heating elements switched on as specified in manufacturer's instructions under conditions of clause 11 of relevant standard but using the load specified in 3.1.9, microwave power output being approximately 50 % (IEC 60335-2-90:2015)		N/A
	If no instructions provided, appliance operated until steady conditions established (IEC 60335-2-90:2015)		N/A
AA.18	Endurance (IEC 60335-2-90:2015)		--
	Before measuring microwave leakage, following additional conditioning is carried out: (IEC 60335-2-90:2015)		--
	Resistive heating elements operated: (IEC 60335-2-90:2015)		--
	- 30 min if they used for radiant heating; (IEC 60335-2-90:2015)		N/A
	- 60 min if they used for convection heating. (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
AA.19	Abnormal operation (IEC 60335-2-90:2015)		--
AA.19.1	Test of clause 19.102 carried out at 1,06 times rated voltage (IEC 60335-2-90:2015)		N/A
AA.29	Creepage distances, clearances and distances through insulation (IEC 60335-2-90:2015)		--
AA.29.2	Micro-environment is pollution degree 3 unless (IEC 60335-2-90:2015)		N/A
	insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use (IEC 60335-2-90:2015)		N/A
AA.29.3	No thickness requirements for sheaths of visibly glowing heating elements if door interlocks provide all-pole disconnection (IEC 60335-2-90:2015)		N/A
BB	ANNEX BB (NORMATIVE) REQUIREMENTS FOR COMMERCIAL MICROWAVE OVENS WITHOUT A CAVITY DOOR AND WITH CONVEYOR-TYPE MEANS (IEC 60335-2-90:2015)		--
	This annex modifies corresponding clauses and subclauses of Part 2-90 or, where this is not applicable, of Part 1 of IEC 60335, to indicate requirements for commercial microwave ovens without a cavity door and with conveyor-type means (IEC 60335-2-90:2015)		N/A
	Where it is unclear whether a clause or subclause of this annex is intended to modify the corresponding text of Part 2-90 or that of Part 1, this is specified (IEC 60335-2-90:2015)		N/A
BB.7	Marking and instructions (IEC 60335-2-90:2015)		--
	Water pressure or pressure areas (kPa) for the appliances determined for connection to water supply or (IEC 60335-2-90:2015)		N/A
	this is fixed in the instructions for use (IEC 60335-2-90:2015)		N/A
	Model or type reference and serial number and (IEC 60335-2-90:2015)		N/A
	if generator(s) separate from cavity part of appliance, information also appear on the generator(s) (IEC 60335-2-90:2015)		N/A
BB.7.12	Instructions include additional substance of following: (IEC 60335-2-90:2015)		--
	- WARNING: Do not programme excessive heating times. Overheating can result in contamination or fire; (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- details for necessary cleaning required for hygienic reasons (e.g. cavity, transportation means) and also for functional reasons (e.g. means of microwave interlock, sensor); (IEC 60335-2-90:2015)		N/A
	- information necessary for dispatch, positioning, installation and operation, including details of weight, dimensions and required minimum distances; (IEC 60335-2-90:2015)		N/A
	- if smoke is observed, follow the instructions supplied by the manufacturer in order to contain the fire; (IEC 60335-2-90:2015)		N/A
BB.7.101.1	Label provided, together with instructions for fixing it in a conspicuous place close to exit port (IEC 60335-2-90:2015)		N/A
	Label state substance of following, if applicable: (IEC 60335-2-90:2015)		--
	- WARNING: Microwave heating of beverages and similar can result in delayed eruptive boiling, therefore care must be taken when handling the container; (IEC 60335-2-90:2015)		N/A
	- WARNING: Microwaved food and beverages can be very hot, handle with care (IEC 60335-2-90:2015)		N/A
BB.7.101.2	Instructions for operator include substance of following warnings: (IEC 60335-2-90:2015)		--
	- WARNING: If parts of entrance ports, exit ports, means of access, viewing openings, microwave barriers, covers, the microwave enclosure or any other means named by the manufacturer are damaged, the appliance shall not be operated until it is repaired by a skilled person. Until repairs are carried out, the appliance shall be set in a permanent non-operational condition (e.g. with key switch, code-card or similar devices). Further details shall be included in the instructions for use. (IEC 60335-2-90:2015)		N/A
	- WARNING: Instructed persons shall only operate the microwave oven. The instructed persons shall regularly, but at a minimum of once a year, be instructed by a skilled person. A record of the instruction provided shall be recorded. (IEC 60335-2-90:2015)		N/A
BB.7.101.3	Service or repair manual include substance of following: (IEC 60335-2-90:2015)		--
	- WARNING: The microwave oven shall comply with requirements of Clause 32 after every repair and according to the instructions of the manufacturer. (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Attention: Persons shall not be exposed to excessive emitted microwave energy from the microwave generator. All connections, waveguides, flanges, seals etc. of the microwave enclosure and microwave barriers shall be safely constructed so that the microwave leakage does not exceed the allowed limit. The operation of the appliance without a microwave absorbing load is to be avoided. The appliance shall be regularly maintained and kept in a good condition to ensure that microwave leakage does not exceed the allowed limit. (IEC 60335-2-90:2015)		N/A
	The microwave oven shall only be maintained by skilled persons. (IEC 60335-2-90:2015)		N/A
	The manufacturer shall supply detailed recommendations on the prevention of cavity fires together with guidance on how fires should be handled, should they occur. Guidance should also be provided on dealing with low water content foods, metal objects and containers with metal. (IEC 60335-2-90:2015)		N/A
BB.8	Protection against accessibility to live parts (IEC 60335-2-90:2015)		--
BB.8.1.1	Use of test probe B of IEC 61032 according requirements (IEC 60335-2-90:2015)		N/A
BB.9	Starting of motor-operated appliances (IEC 60335-2-90:2015)		--
BB.9.1	Motors drive transportation means start under all voltage conditions may occur in use (IEC 60335-2-90:2015)		N/A
	Test with described conditions starting motor three times at a voltage equal to 0,85 times rated voltage (IEC 60335-2-90:2015)		N/A
	Appliances provided with motors having other than centrifugal starting switches, test is repeated at a voltage equal to 1,06 times rated voltage (IEC 60335-2-90:2015)		N/A
	In all cases motor start and function in such a way that safety is not affected and overload protection devices of motor not operate (IEC 60335-2-90:2015)		N/A
BB.11	Heating (IEC 60335-2-90:2015)		--
BB.11.7	Microwave oven operated as specified in clause BB.3.1.9 until steady conditions established (IEC 60335-2-90:2015)		N/A
BB.13	Leakage current and electric strength at operating temperature (IEC 60335-2-90:2015)		--
	The last sentence of the fourth paragraph is void (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
BB.15	Moisture resistance (IEC 60335-2-90:2015)		--
BB.15.1.1	Microwave ovens classified as IPX0, IPX1, IPX2, IPX3 and IPX4, which intended for placing on floor, subjected for a period of 5 min to described splash test (IEC 60335-2-90:2015)		N/A
BB.15.2	Quantity of 0,5 l water containing approximately 1 % NaCl poured steadily over most unfavourable parts but excluding microwave enclosure, over a period of 15 s (IEC 60335-2-90:2015)		N/A
	Quantity of 0,5 l of water containing approximately 1 % NaCl, for each kW rated microwave power output, poured steadily at a rate of 0,5 l per 15 s into microwave enclosure (IEC 60335-2-90:2015)		N/A
BB.15.102	Microwave ovens provided with a tap intended for filling or cleaning, constructed so that water from tap cannot come into contact with live parts (IEC 60335-2-90:2015)		N/A
	Test as described Microwave oven withstand an electric strength test specified in clause 16.3 (IEC 60335-2-90:2015)		N/A
BB.18	Endurance (IEC 60335-2-90:2015)		--
	Means of access and covers opened and then closed as in normal use. Number of operations is 6 cycles per 1 min or (IEC 60335-2-90:2015)		N/A
	maximum quantity given for construction (IEC 60335-2-90:2015)		N/A
	Following means of access subjected to following cycles of operation: (IEC 60335-2-90:2015)		--
	- Means of access and cleaning covers that can opened by instructed persons for purpose of venting, flushing lamp covers, cleaning etc.10 000 cycles (IEC 60335-2-90:2015)		N/A
	- Maintenance covers that can be opened by skilled persons 300 cycles (IEC 60335-2-90:2015)		N/A
	- Protective blocking structures which protect ordinary persons.....200 000 cycles (IEC 60335-2-90:2015)		N/A
	After test microwave leakage not exceed limit specified in clause 32 and system still function (IEC 60335-2-90:2015)		N/A
BB.19	Abnormal operation (IEC 60335-2-90:2015)		--
BB.19.8	Microwave ovens intended to be star-connected operated with neutral conductor disconnected (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Clause 19.13 applied after test (IEC 60335-2-90:2015)		N/A
BB.19.13	Microwave leakage not exceed 50 W/m ² (IEC 60335-2-90:2015)		N/A
BB.19.104	Most onerous condition, i.e. stopping belt, selected. During test, any fire in cavity contained within appliance (IEC 60335-2-90:2015)		N/A
BB.19.105	Appliances operated with same load items as in normal operation but with load on transportation means only in cavity. Number of load items is lowest allowing operation of at least one microwave generator at maximum power. Period of operation is longest allowed by belt speed setting or similar (IEC 60335-2-90:2015)		N/A
BB.20	Stability and mechanical hazards (IEC 60335-2-90:2015)		--
BB.20.1	Maintenance covers on vending appliances that can be opened and accessories placed in most unfavourable position (IEC 60335-2-90:2015)		N/A
BB.20.2	This is also to be applied on operating elements i.e. handles or hand wheels (IEC 60335-2-90:2015)		N/A
	If fans of microwave oven can be operated when means of access is open, rotating and moving parts of motors and fans located or protected in such a way as to provide adequate protection against injury, when microwave oven is used or when cleaned as intended. It not be possible to touch moving or rotating parts of fans (IEC 60335-2-90:2015)		N/A
	To fulfil this requirement it is possible to set microwave oven in a permanent non-operational condition (e.g. with key switch, code-card or similar devices) (IEC 60335-2-90:2015)		N/A
	Compliance checked according to requirements in clause BB.8.1.1. (IEC 60335-2-90:2015)		N/A
BB.20.101	Transportation means withstand weights according to instructions of manufacturer (IEC 60335-2-90:2015)		N/A
	Where no instructions provided, test as described (IEC 60335-2-90:2015)		N/A
	Vending-type appliances, same test made on removing area, if possible. However, a weight of 8 kg used (IEC 60335-2-90:2015)		N/A
	Appliance not tilt and (IEC 60335-2-90:2015)		N/A
	no damage to loading and removing area (IEC 60335-2-90:2015)		N/A
BB.20.102	Protective enclosures according to clause BB.20.2 be detachable except where (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- an appropriate interlock prevents operation of motors or fans without protective enclosures; (IEC 60335-2-90:2015)		N/A
	- protective enclosures solid part of housing. (IEC 60335-2-90:2015)		N/A
BB.22	Construction (IEC 60335-2-90:2015)		--
	Subclauses 22.103 to 22.115 applicable only for cavity doors opened by user for access to load. Such doors not means of access (IEC 60335-2-90:2015)		N/A
BB.22.116	This clause is not applicable (IEC 60335-2-90:2015)		N/A
BB.22.119	Protection against accessibility to microwave-containing regions (IEC 60335-2-90:2015)		--
BB. 22.119.1	General (IEC 60335-2-90:2015)		--
	This subclause deals with entrance and exit ports, means of access and viewing openings. Only instructed persons may be close to these ports, means and openings, except that ordinary persons may be in the vicinity of entrance and exit ports under certain conditions (IEC 60335-2-90:2015)		N/A
	Microwave leakage and leakage extraction method in clause BB.32 used for determination of a reference surface. This, together with type of ports, means and openings and their dimensions determine specification for microwave barriers of appliance and any separate barrier installations (IEC 60335-2-90:2015)		N/A
BB. 22.119.2	Microwave enclosure opening and microwave barrier specifications (IEC 60335-2-90:2015)		--
	Dimensions of viewing openings and fixed means of access for ventilation, liquid evacuation or similar less than 20 mm x 50 mm (mm): (IEC 60335-2-90:2015)		N/A
	Microwave barrier withstand tests in clauses 21.102 and 21.104 (IEC 60335-2-90:2015)		N/A
	Furthermore, it not possible to insert test probe B of IEC 61032 through any holes in the barrier, with exception of the accessible end opening (IEC 60335-2-90:2015)		N/A
BB. 22.119.3	Additionally, microwave barrier not constructed of metal or microwave absorbing material in such a way that it can guide or absorb microwaves and their accessible openings not larger than openings which they protect (IEC 60335-2-90:2015)		N/A
	Microwave barrier removable only with aid of a tool (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Dimensional and microwave leakage measurement requirements on microwave barriers in relation to dimension and type of opening comply with table BB.101 (IEC 60335-2-90:2015)		N/A
	Length of barrier calculated from reference surface, obtained by measurements in clause BB.32 (IEC 60335-2-90:2015)		N/A
	Barrier extend all way to opening of microwave enclosure (IEC 60335-2-90:2015)		N/A
BB. 22.119.4	For conveyor type appliances a barrier installation in all loading and removing areas where ordinary persons place or remove microwave load (IEC 60335-2-90:2015)		N/A
	- If loading or removing area for microwave loads is 800 mm above floor level, barrier be at least 1200 mm high; (IEC 60335-2-90:2015)		N/A
	- If loading or removing area for microwave loads is 1000 mm above floor level, barrier be at least 1400 mm high; (IEC 60335-2-90:2015)		N/A
	- The requirements for other heights be in proportion to the above requirements. (IEC 60335-2-90:2015)		N/A
	- Distance from any part of entrance or exit port to any periphery of barrier a minimum of 850 mm from reference surface defined and determined in clause BB.32. (IEC 60335-2-90:2015)		N/A
	- It is not be possible to insert test probe B of IEC 61032 through the barriers. (IEC 60335-2-90:2015)		N/A
BB. 22.119.5	Vending machines with an exit port have either a protective blocking structure or a transportation means (IEC 60335-2-90:2015)		N/A
	Appliances with a protective blocking structure, surface of structure outside the reference surface described in clause 32, when load being removed (IEC 60335-2-90:2015)		N/A
	Appliances without protective blocking structure, comply with the requirements in clause 8.1.1 but in relation to reference surface (IEC 60335-2-90:2015)		N/A
BB. 22.119.6	Microwave warning sign (IEC 60417-5140 (DB:2003-04)) of a size specified in IEC 60417, placed in areas where entrance and exit ports visible through barrier, or (IEC 60335-2-90:2015)		N/A
	near opening in microwave barrier through which load is transported (IEC 60335-2-90:2015)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Warning text include substance of following: MICROWAVE ENERGY DO NOT INSERT THE HAND OR FOREIGN OBJECTS  (IEC 60335-2-90:2015)		N/A
	Same warning sign placed at viewing openings with holes larger than $\varnothing$ 12 mm and which not protected by visually transparent protective devices (IEC 60335-2-90:2015)		N/A
BB.27	Provision for earthing (IEC 60335-2-90:2015)		--
BB.27.101	Any external interconnection cable(s) between a separate main power supply (supplies) in a separate enclosure, and cavity portion in a separate enclosure or installation include an additional earthing wire for high voltage circuits (IEC 60335-2-90:2015)		N/A
	Insulation of wire comply with requirements for insulation for operating high voltage (IEC 60335-2-90:2015)		N/A
BB.27.102	Any secondary (high voltage) circuit earthing of magnetrons by a separate wire connected to its waveguide in such a way that wire does not come loose during service or repair (IEC 60335-2-90:2015)		N/A
BB.30	Resistance to heat and fire (IEC 60335-2-90:2015)		--
BB.30.2	Microwave ovens intended to be fed automatically tested according clause 30.2.3 (IEC 60335-2-90:2015)		N/A
BB.30.2	Microwave ovens intended to be fed automatically tested according clause 30.2.3 (IEC 60335-2-90:2015)		N/A
BB.32	Radiation, toxicity and similar hazards (IEC 60335-2-90:2015)		--
	Microwave leakage checked by two test series (IEC 60335-2-90:2015)		N/A
	First test series as described (IEC 60335-2-90:2015)		N/A
	Second test series as described (IEC 60335-2-90:2015)		N/A

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
CC	ANNEX CC (INORMATIVE) OVERVIEW OF THE REQUIREMENTS FOR COVERS, MEANS OF ACCESS AND SIMILAR (IEC 60335-2-90:2015)		P
DD	ANNEX DD (INORMATIVE) RATIONALES FOR THE MICROWAVE BARRIER AND ASSOCIATED LEAKAGE TESTS (IEC 60335-2-90:2015)		P
EE	ANNEX EE (NORMATIVE) MICROWAVE OVENS INTENDED TO BE USED ON BOARD SHIPS (IEC 60335-2-90:2015)		--
EE 6.2	Appliances for open deck use be IPX6. (IEC 60335-2-90:2015)		N/A
EE 7.1	- rated frequency or rated frequency range in Hz; (IEC 60335-2-90:2015)		N/A
EE 7.12	Instructions for use also include the substance of the following: (IEC 60335-2-90:2015)		--
	- usage on board ships; (IEC 60335-2-90:2015)		N/A
	- installation place (open deck protective enclosure, dayrooms); (IEC 60335-2-90:2015)		N/A
	- fastening means. (IEC 60335-2-90:2015)		N/A
	- details for cleaning door seals, cavities, shelves and adjacent parts; (IEC 60335-2-90:2015))		N/A
	The instructions for microwave ovens that are intended to be used on board ships state: (IEC 60335-2-90:2015/AMD1:2015)		--
	CAUTION: Verify that the voltage and frequency of the mains supply of the ship matches the rated voltage and rated frequency or rated frequency range of the microwave oven. (IEC 60335-2-90:2015/AMD1:2015)		N/A
EE 11	Microwave ovens marked with a rated frequency are tested with the most onerous frequency within $\pm 4\%$ of the rated frequency. (IEC 60335-2-90:2015)		N/A
	Microwave ovens marked with a rated frequency range are tested with the most onerous frequency within this range. (IEC 60335-2-90:2015)		N/A
EE 22.101	Appliances withstand the pulses to which they may be subjected. (IEC 60335-2-90:2015)		N/A
	Compliance is checked by carrying out the half-sine pulse tests specified in IEC 60068-2-27 (IEC 60335-2-90:2015)		N/A
	Appliance is tested as specified (IEC 60335-2-90:2015)		N/A

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliance shows no damage that could impair compliance with 8.1, 16.3, Clause 29 and Clause 32 and connections not have worked loose. (IEC 60335-2-90:2015)		N/A
EE 22.102	Appliances withstand the vibrations to which they may be subjected. (IEC 60335-2-90:2015)		N/A
	Compliance is checked by carrying out the vibration tests specified in IEC 60068-2-6 (IEC 60335-2-90:2015)		N/A
	Appliance is tested as specified (IEC 60335-2-90:2015)		N/A
	Appliance shows no damage that could impair compliance with 8.1, 16.3, Clause 29 and Clause 32 and connections not have worked loose. (IEC 60335-2-90:2015)		N/A
EE 22.103	Shelves have a non-detachable slip resistant top surface. (IEC 60335-2-90:2015)		N/A
	Compliance is tested as specified. (IEC 60335-2-90:2015)		N/A
	During each of these tests, the plate shall not slide onto a raised shelf periphery if any, or onto the cavity wall. (IEC 60335-2-90:2015)		N/A
EE 31	Compliance is checked by the salt mist test Kb of IEC 60068-2-52: (IEC 60335-2-90:2015)		--
	- for open deck use severity 1 is applicable; (IEC 60335-2-90:2015)		N/A
	- for dayrooms use severity 2 is applicable. (IEC 60335-2-90:2015)		N/A
	Appliance is tested as specified (IEC 60335-2-90:2015)		N/A
	After the test, the appliance does not have deteriorated to such an extent that compliance with this standard, in particular with Clauses 8 and 27, is impaired. (IEC 60335-2-90:2015)		N/A
	Coating not be broken and not have detached from the metal surface. (IEC 60335-2-90:2015)		N/A

IEC 60335-2-90					
Clause	Requirement + Test			Result - Remark	Verdict
10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	ΔP	Required ΔP	Remark
235 V, 50 Hz	1600	1627,6	+1,7%	+15%	P
Supplementary information: --					

10.2	TABLE: Current deviation				N/A
Current deviation of/at:	I rated (A)	I measured (A)	ΔI	Required ΔI	Remark
Supplementary information: --					

11.8	TABLE: Heating test			P
	Test voltage (V).....	254,4 V		—
				
	Ambient (°C)	22,0 / 22,7		—
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
H.F. transformer winding		35,3	85, Class 130	
Varistor		31,4	T85-25=60	
Opto-coupler		32,8	T100-25=75	
Relay ambient		38,0	T85-25=60	
Relay VPC		39,6	T85-25=60	
Internal surface of the panel plastic		34,9	For clause 30.1	
Control panel PCB		37,5	120	
Power cord		44,3	50	
Lamp holder		92,0	For clause 30.1	
High voltage capacitor		49,7	T85-25=60	
Interlock switch		42,1	T105-25=80	
Magnetron metal cover		66,4	Ref.	
Magnetron thermal cut-out		146,3	Ref.	
Cavity thermal cut-out		70,3	Ref.	
Fan motor winding		40,5	85, Class 130	
Turntable motor winding		71,5	80, Class 120	
H.V. transformer primary winding		141,8	180, Class 220	
H.V. fuse holder		49,7	For clause 30.1	
X2 capacitor on Noise filter board		51,6	T100-25=75	

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
Y capacitor on Noise filter board	53,9	T125-25=100	
Noise filter PCB	47,1	120	
Plastic supporting fan motor	53,6	For clause 30.1	
Plastic supporting door-switch system	43,0	For clause 30.1	
Internal wire for H.V. transformer	84,6	T200-25=175	
Internal wire for others	51,5	T105-25=80	
Window (centre point)	22,2	65	
External metal enclosure (top)	35,4	48	
External metal enclosure (left)	38,0	48	
External metal enclosure (right)	28,6	48	
External metal enclosure (back)	45,5	48	
Door metal	27,3	48	
Door handle	8,9	60	
Control panel plastic	17,1	60	
Test corner (back)	41,5	65	
Test corner (bottom)	27,9	65	
Test corner (side)	13,5	65	
Test corner (top)	10,3	65	
Supplementary information: --			

11.8	TABLE: Heating test, resistance method					P
	Test voltage (V)		254,4 V			—
	Ambient, t1 (°C)		22,0			—
	Ambient, t2 (°C)		22,7			—
Temperature rise of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class
Fan motor winding		377,2	443,2	44,2	95	Class 130
Turntable motor winding		150,4	194,9	75,2	90	Class 120
HV transformer Pri, Winding		1,21	1,96	151,4	180	Class 220
HV transformer Sec, Winding		97,5	158,5	153,7	180	Class 220
Supplementary information: --						

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
13.2	TABLE: Leakage current		P
	Heating appliances: 1,15 x rated input (W) ...:	--	—
	Motor-operated and combined appliances: 1,06 x rated voltage (V):	254,4	—
Leakage current between:		I (mA)	Max. allowed I (mA)
Live part and earthed metal part		0,245	0,75
Live part and control panel		0,044	0,35 (peak)
Supplementary information: The max. data were recorded.			

13.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
Live part and earthed metal part		1000	No
Internal wire and accessible surface		1750	No
Live part and control panel		3000	No
Supplementary information: --			

14	TABLE: Transient overvoltages					N/A
Clearance between:		CI (mm)	Required CI (mm)	Rated impulse voltage (V)	Impulse test voltage (V)	Flashover (Yes/No)
Supplementary information:						

16.2	TABLE: Leakage current			P
	Single phase appliances: 1,06 x rated voltage (V).....:	254,4		—
	Three phase appliances 1,06 x rated voltage divided by $\sqrt{3}$ (V).....:	--		—
Leakage current between:		I (mA)	Max. allowed I (mA)	
Live part and earthed metal part		0,284	0,75	
Live part and control panel		0,028	0,25	
Supplementary information: --				

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
16.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
Live part and earthed metal part		1250	No
Internal wire and accessible surface		1750	No
Live part and control panel		3000	No
Supplementary information:			

17	TABLE: Overload protection		P
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
H.F. transformer winding		28,6	175-25=150, Class 130
Supplementary information: --			

17	TABLE: Overload protection, resistance method					N/A
	Test voltage (V)					—
	Ambient, t1 (°C).....					—
	Ambient, t2 (°C).....					—
Temperature of winding:		R1 (Ω)	R2 (Ω)	ΔT (K)	T (°C)	Max. T (°C)
Supplementary information: --						

19	Abnormal operation conditions						P
Operational characteristics			YES/NO	Operational conditions			
Are there electronic circuits to control the appliance operation?			Yes	--			
Are there "off" or "stand-by" position?			Yes	Stand-by position			
The unintended operation of the appliance results in dangerous malfunction?			Yes	--			
Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result

IEC 60335-2-90							
Clause	Requirement + Test			Result - Remark			Verdict
19.2	--	--	--	--	--	--	--
19.3	--	--	--	--	--	--	--
19.4	--	--	--	--	--	--	--
19.5	--	--	--	--	--	--	--
19.6	--	--	--	--	--	--	--
19.7	--	--	--	--	--	--	--
19.8	--	--	--	--	--	--	--
19.9	--	--	--	--	--	--	--
19.10	--	--	--	--	--	--	--
19.11.2	See clause 19.11.2	No hazard	--	--	--	--	Pass
19.11.4.8	--	--	--	--	--	--	--
19.101	Rated voltage empty	Test continued to steady state condition, No hazard	--	--	--	--	Pass
19.102	Rated voltage short timer	Test continued to steady state condition, No hazard	--	--	--	--	Pass
19.103	Rated voltage air-opening blocked, and motor locked.	90 mins, No hazard	--	--	--	--	Pass
19.14	1.06 times rated voltage all relay short.	Test continued to steady state condition, No hazard	--	--	--	--	Pass
Supplementary information: --							

19.7	TABLE: Abnormal operation, locked rotor/moving parts					N/A
	Test voltage (V)..... :					—
	Ambient, t1 (°C)					—
	Ambient, t2 (°C)					—
Temperature of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
Supplementary information: --						

IEC 60335-2-90					
Clause	Requirement + Test			Result - Remark	Verdict
19.9	TABLE: Abnormal operation, running overload				N/A
	Test voltage (V)				—
	Ambient, t1 (°C).....				—
	Ambient, t2 (°C).....				—
Temperature of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)
Supplementary information: --					

19.13	TABLE: Abnormal operation, temperature rises							P
Thermocouple locations:		Max. temperature rise measured, Δ T (K)						Max. temperature rise limit, Δ T (K)
		19.10 1	19.10 2	19.10 3a	19.10 3b	19.10 3c	19.10 3d	
H.F. transformer winding		43,5	56,4	44,2	54,7	28,6	54,4	150, Class 130
Opto-coupler		42,4	55,3	41,0	53,3	26,5	53,9	T100-25=75
Internal surface of the panel plastic		30,6	41,2	31,9	39,8	24,0	41,6	For clause 30.1
Power cord		52,2	61,5	53,3	61,3	51,6	44,0	150
Fan motor winding		51,1	62,8	64,6	64,6	69,8	62,7	150, Class 130
Turntable motor winding		50,5	71,6	36,3	76,0	15,3	64,6	140, Class 120
H.V. transformer primary winding		69,9	117,1	68,5	122,8	44,9	128,2	225, Class 220
Test corner		32,1	46,1	34,0	43,3	23,2	54,6	150
Supplementary information: 19.103a: block air inlet; 19.103b: block air outlet; 19.103c: lock fan motor; 19.103d: lock turntable motor.								

19.11.2 a	TABLE: Abnormal operation for magnetron			P
Fault condition	Short circuit	Open circuit	Result	
b	--	H.V. Capacitor	No microwave generates, no hazard	
b	--	H.V. Diode	No microwave generates, no hazard	
c	H.V. Capacitor	--	H.V. fuse operated, no hazard	
d	H.V. Diode	--	H.V. fuse operated, no hazard	
19.11.2 of IEC 60335-2-90	--	Cathode of magnetron	No microwave generates, no hazard	
19.11.2 of IEC 60335-2-90	--	Anode of magnetron	No microwave generates, no hazard	

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict
19.11.2 of IEC 60335-2-90	Cathode of magnetron and anode of magnetron	--	No microwave generates, no hazard
Test for the noise filter PCB			
b	--	C2	Normal operation
b	--	C1	Normal operation
b	--	C3	Normal operation
Supplementary information: Appliance supplied at 254,4 V and operated in microwave mode. b denotes open circuit at the terminals of any component. c denotes short circuit of capacitor. d denotes short circuit of any two terminals of an electronic component. f denotes failure of microprocessors and integrated circuits except components such as thyristors and triacs.			

19.11.2 b	TABLE: Abnormal operation for control PCB			P
Fault condition	Short circuit	Open circuit	Result	
b	—	RV1	Normal operate	
b	—	C1	Not operate	
b	—	C2	Normal operate	
b	—	C3	Normal operate	
b	—	C5	Normal operate	
b	—	D2	Normal operate	
b	—	D5	Not operate	
b	—	D7	Not operate	
c	C1	—	The weak part of PCB becomes open circuit immediately.	
c	C2	—	The weak part of PCB becomes open circuit immediately.	
c	C3	—	Not operate	
c	C3	—	Not operate	
d	RV1	—	The weak part of PCB becomes open circuit immediately.	
d	D2	—	The weak part of PCB becomes open circuit immediately.	
d	D5	—	Not operate	
d	D7	—	Not operate	
f	U3 Pin1-2	U3 Pin1-2	Not operate	
f	—	U1 Pin5	Not operate	
f	U1 Pin8-5	—	The weak part of PCB becomes open circuit immediately.	

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

Appliance supplied at 240 V and operated in microwave mode.

b denotes open circuit at the terminals of any component.

c denotes short circuit of capacitor.

d denotes short circuit of any two terminals of an electronic component.

f denotes failure of microprocessors and integrated circuits except components such as thyristors and triacs.

21.1	TABLE: Impact resistance			P
Impacts per surface		Surface tested	Impact energy (Nm)	Comments
3		Enclosure	0,5	Pass
3		Control panel	0,5	Pass
3		Door glass	0,5	Pass
3		Handle	0,5	Pass
Supplementary information:				

24.1	TABLE: Critical components information					P
Object/part No.	manufac-turer/trademark	type/model	technical data	standard	mark(s) of conformity	
Fan motor	Galanz	GAL6309E(30)-ZD	AC220-240V, 50/60Hz, Class B	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance	
Turntable motor	Galanz	GAL-33-30-TD(B)	AC30V, 50/60Hz, 4W Class E	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance	
High voltage capacitor	Ningbo Bicai Industry Co.,Ltd.	CH85 21120	2100V AC T85 1.2uF 50/60Hz	IEC 61270-1: 1996 EN 61270-1: 1996	VDE 138073	
Alt.	Anhui Juan kuang Electric Co.,Ltd	CH85	2100V AC T85 1.2uF 50/60Hz	IEC 61270-1: 1996 EN 61270-1: 1996	VDE 40041452	
High voltage diode	Jiangsu Gaoxin Electronic Co Ltd	CL04-12	FVD:12V, AFC: 450mA, RBV: 12KVDC	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance	
High voltage fuse	Shanghai Songshan Electronics Co., Ltd	GERF1-40, GERF-IV, GERF-VII	AC 5KV, 0,85 A	IEC 60127-1: 2006 + A1: 2011 + A2: 2015 IEC 60127-2: 2014 EN 60127-1: 2006 + A1: 2011 + A2: 2015 EN 60127-2: 2014	TÜV Rd J 50099362	
Alt.	Dongguan Better Electronics Technology Co., Ltd.	HV or 722	AC 5KV, 0,85 A	IEC 60127-1: 2006 + A1: 2011 + A2: 2015 IEC 60127-2: 2014 EN 60127-1: 2006 + A1: 2011 + A2: 2015 EN 60127-2: 2014	TÜV Rd J 50136139	
H.V. transformer	Galanz	GAL-1000E-1G	AC 230-240V, 50Hz Class 220	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance	

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
Lamp and holder (Integrated lamp)	Deqing New Minghui Electric Lighting Co.,Ltd.	Z187	Holder:250V 2A Lamp:230V 20W	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Alt.	Ningbo Jiahong Lighting And Technology Co Ltd	Z187	Holder:250V 2A Lamp:230V 20W	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Alt.	Deqing Dinghui Lighting Co.,Ltd.	F-E14	Holder:250V 2A Lamp:230V 20W	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Alt.	Dongguan HeYu Lighting Products Co., Ltd.	Z187	Holder:250V 2A Lamp:230V 20W	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Alt.	Deqing New Minghui Electric Lighting Co.,Ltd.	Z187	Holder:250V 2A LED Lamp:230V 1W or 1.5W	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Alt.	MLS CO.,LTD	Z187	Holder:250V 2A LED Lamp:230V 1W or 1.5W	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Alt.	Dongguan HeYu Lighting Products Co., Ltd.	Z187	Holder:250V 2A LED Lamp:230V 1W or 1.5W	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Magnetron	Galanz	M24FC-310A	FO:2450-2470MHz	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Micro switch	Guangdong Galanz Enterprises Co., Ltd.	W-15-102C W-15-302C	AC 250 V, 15 A, T105 or T125, 5E4	IEC 61058-1: 2016 IEC 61058-1-1: 2016 EN IEC 61058-1:2018 EN 61058-1-1:2016	TUV Rd R 50181337
Alt.	Yueqing Tongda Wire Electric Factory	HK-14	AC 250 V, 16 A, T125, 5E4	IEC 61058-1: 2016 IEC 61058-1-1: 2016 EN IEC 61058-1:2018 EN 61058-1-1:2016	VDE 40027032
Plastic material used for control panel /door cover	Galanz	ABS or PP or PC	94 V-0 / 94HB	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Plastic supporting frame for micro switch and noise filter board	Galanz	PBT or PC or PP	94 V-0 / 94HB	IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Plug	Galanz	GAL-01V	AC 250V, 16A	DIN VDE 0620-2-1: 2016 + A1	KEMA 35-109593

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	Guangdong Galanz Electric Fittings Manufacturing Co.,Ltd	GAL-01V	AC 250V, 16A	DIN VDE 0620-2-1: 2016 + A1	VDE 40051950
Alt.	Guangdong Unirise Electric Wire & Cable Co.,Ltd	UE-312	AC 250V, 16A	DIN VDE 0620-2-1: 2016 + A1	VDE 40013356
Alt.	Mainland Electric Wire & Cable Co., Ltd.	ML-302	AC 250V, 16A	DIN VDE 0620-2-1: 2016 + A1	VDE 40012805
Alt.	Friendship Enterprises International Ltd.	FE-03P	AC 250V, 16A	DIN VDE 0620-2-1: 2016 + A1	VDE 40021547
Alt.	Interchangeable	Interchangeable	AC 250V, 16A	DIN VDE 0620-2-1: 2016 + A1	VDE, KEMA or other EU Approval
BS Plug	Friendship Electronics Int Ltd	FE-129P	AC 250V, w/approved 13A current fuse	BS 1363-1:2023	ASTA1293
Alt.	Friendship Electronics Int Ltd	FE-130P	AC 250V, w/approved 13A current fuse	BS 1363-1:2023	ASTA1307
Alt.	Guangdong Unirise Electric Wire & Cable Co.,Ltd	UE-324	AC 250V, w/approved 13A current fuse	BS 1363-1:2023	ASTA941
Alt.	Guangdong Mainland Wire & Cable Co.,Ltd.	ML-313	AC 250V, w/approved 13A current fuse	BS 1363-1:2023	ASTA876
Power cord	Hui Zhou Mainland Electric Wire & Cable Co Ltd	H05RN-F	3G 1,0mm ² 3G 0,75mm ² Length < 2 m	EN 50525-2-21:2011	VDE 40026038
Alt.	Guangdong Rifeng Electrical Cable Co., Ltd.	H05RN-F	3G 1,0mm ² 3G 0,75mm ² Length < 2 m	EN 50525-2-21:2011	VDE 40015999
Alt.	Guangdong Unirise Electric Wire & Cable Co.,Ltd	H05RN-F	3G 1,0mm ² 3G 0,75mm ² Length < 2 m	EN 50525-2-21:2011	VDE 40044005
Alt.	Guangzhou Panyu Cable Group Co.,Ltd	H05RN-F	3G 1,0mm ² 3G 0,75mm ² Length < 2 m	EN 50525-2-21:2011	VDE 40033315

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	Ningbo Light-Heavy Electronics Technology Co., Ltd	H05RN-F	3G 1,0mm ² 3G 0,75mm ² Length < 2 m	EN 50525-2-21:2011	VDE 40024301
Alt.	Interchangeable	H05RN-F	3G 1,0mm ² 3G 0,75mm ² Length < 2 m	EN 50525-2-21:2011	VDE or other valid EU Approval
Internal wire to H.V. transformer	Jiangyin Qianlima electrical material co., LTD	3239	60000V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E204933 Tested with appliance
Internal wire	Linoya Electronic Technology Co Ltd	1015	16-22AWG, 600V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E315619 Tested with appliance
Alt.	Yang Tai Wire & Cable Co Ltd	1015	16-22AWG, 600V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E214859 Tested with appliance
Alt.	Yutong Electronics (HuiZhou) Co., LTD	1015	16-22AWG, 600V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E301048 Tested with appliance
Alt.	Dongguan Evk Electric Technique Co Ltd	1015	16-22AWG, 600V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E302679 Tested with appliance
Alt.	Kelin Wire Co Ltd (Dongguan)	1569	16-24AWG, 300V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E250866 Tested with appliance
Alt.	Fu Tai Electronics Sdn Bhd	1569	16-24AWG, 300V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E314597 Tested with appliance
Alt.	Dongguan Evk Electric Technique Co Ltd	1569	16-24AWG, 300V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E302679 Tested with appliance
Alt.	Yang Tai Wire & Cable Co Ltd	1569	16-24AWG, 300V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E214859 Tested with appliance

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	Yutong Electronics (HuiZhou) Co., LTD	1569	16-24AWG, 300V, 105°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E301048 Tested with appliance
Alt.	Guangzhou Fengtai Meihua Cable Co Ltd	1332	16-22AWG, 300V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E204798 Tested with appliance
Alt.	Dongguan Evk Electric Technique Co Ltd	1332	16-22AWG, 300V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E302679 Tested with appliance
Alt.	Yang Tai Wire & Cable Co Ltd	1332	16-22AWG, 300V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E214859 Tested with appliance
Alt.	Dongguan Evk Electric Technique Co Ltd	3122	16-26AWG, 300V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E302679 Tested with appliance
Alt.	Nizing Electric Co Ltd	3122	16-26AWG, 300V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E215834 Tested with appliance
Alt.	Yang Tai Wire & Cable Co Ltd	3122	16-26AWG, 300V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E214859 Tested with appliance
Alt.	Foshan Shunde Pantai Special Wire Rod Electronics Co Ltd	3122	16-26AWG, 300V, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-90 Clause 23.5	UL E346532 Tested with appliance

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
PCB material	Kingboard Laminates Ltd.	KB-1150, KB-2150, KB-3150(C) KB-3152, KB-5150(A) KB-6150, KB-6160 KB-7150 KB-3151C KB-5150& KB-5150G KB-5252 KB-5150 KB-6160C KB-5150H KB-5152 HF-140	94HB /94V-0	IEC/EN 60335-1 IEC/EN 60335-2-90	UL E123995 Tested with appliance
Alt.	ZhaoyuanJinbao Electronics Co., Ltd.	ZD-90F ZD-95(G)F ZD-95(G)F1 ZD-68(G)F ZD-68(G)F1	94V-0	IEC/EN 60335-1 IEC/EN 60335-2-90	UL E141940 Tested with appliance
Alt.	SHENGYI TECHNOLOGY CO.,LTD	S1141 S1600 S3110 S3116	94V-0	IEC/EN 60335-1 IEC/EN 60335-2-90	UL E109769 Tested with appliance
Self-reset Thermal cutout on Oven	Foshan Tianpeng Thermostats Co.,Ltd.	T1/11	AC 250V 10A OFF:140°C± 5°C ON:115°C± 10°C 1E5, T170	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TÜV Rd R5009109 7
Alt.	Jiangsu Changheng Group Control Component Co., Ltd.	KSD	AC 250V 10A OFF:140°C± 5°C ON:115°C± 10°C 1E5, T230	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TUV B 041718 0014
Alt.	XC Electronics (Shenzhen) Corp. Ltd.	KSD301	AC 250V 10A OFF:140°C± 5°C ON:115°C± 10°C 1E5, T220	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TÜV Rd R5003589 8

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	Guangdong Huilong Electrical Appliance Co.,Ltd.	KSD301	AC 250V 10A OFF:140°C± 5°C ON:115°C± 10°C 1E5, T180	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TUV SUD B 097593 0001
Alt.	ChangShu Xin DuAn Electric Co., Ltd.	KSD1	AC 250V 10A OFF:140°C± 5°C ON:115°C± 10°C 1E5, T180	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TÜV Rd R 50374776
Self-reset Thermal cutout on magnetron	Foshan Tianpeng Thermostats Co.,Ltd.	T1/22	AC 250V 10A OFF:180°C± 5°C ON:140°C± 10°C 6E4, T180	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TÜV Rd R5009121 3
Alt.	Jiangsu Changheng Group Control Component Co., Ltd.	KSD	AC 250V 10A OFF:180°C± 5°C ON:140°C± 10°C 1E5, T230	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TUV B 041718 0014
Alt.	XC Electronics(She n zhen)Corp. Ltd.,.	KSD301	AC 250V 10A OFF:180°C± 5°C ON:140°C± 10°C 1E5, T220	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TÜV Rd R5003589 8
Alt.	Guangdong Huilong Electrical Appliance Co.,Ltd.	KSD301	AC 250V 10A OFF:180°C± 5°C ON:140°C± 10°C 1E5, T180	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TUV SUD B 097593 0001

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	ChangShu Xin DuAn Electric Co., Ltd.	KSD1	AC 250V 10A OFF:180°C± 5°C ON:140°C± 10°C 1E5, T180	IEC 60730-2-9: 2015 + A1: 2018 IEC 60730-1: 2013 + A1: 2015 EN 60730-1: 2016+A1+A2 EN IEC 60730-2-9: 2019+A1+A2	TÜV Rd R 50374776
Components of Noise Filter and fuse board are listed as below					
X2 capacitor	Guandong Fengming Electronic Tech.Co.,Ltd.	MKP-X2	X2, AC 275V, 0,22uF, T105	IEC 60384-14: 2013 + A1: 2016 EN 60384-14: 2013 + A1: 2016	VDE 40025702
Alt.	Foshan Shunde Beijiao Hua Da Electric Industrial Co.,Ltd	HD-series or HD-MKP series	X2, AC275V, 0,22uF, T105	IEC 60384-14: 2013 + A1: 2016 EN 60384-14: 2013 + A1: 2016	VDE 40027182
Alt.	Shenzhen Su Rong Capacitors Co., Ltd.	MPX/MKP	X2, AC 280V or 310V, 0,22uF, T100 or T110	IEC 60384-14: 2013 + A1: 2016 EN 60384-14: 2013 + A1: 2016	VDE 40008924
Alt.	Sichuan Sincerity Technology Co., Ltd.	MPX/MKP	X2, AC 275V, 0,22uF, T110	IEC 60384-14: 2013 + A1: 2016 EN 60384-14: 2013 + A1: 2016	VDE 40028812
Y2 capacitor	Haohua Electronic Co.,	CT7	Y2 AC250V, 4700pF, T125	IEC 60384-14: 2013 + A1: 2016 EN 60384-14: 2013 + A1: 2016	VDE 40013601
Alt.	Nanjing Yuyue Electronics Co.,Ltd.	CT7	Y2 AC250V, 4700pF, T125	IEC 60384-14: 2013 + A1: 2016 EN 60384-14: 2013 + A1: 2016	VDE 40008013
Alt.	GUANGDONG DAFU ELECTRONICS CO.,LTD	CT7	Y2 AC300V, 4700pF, T125	IEC 60384-14: 2013 + A1: 2016 EN 60384-14: 2013 + A1: 2016	VDE 40041521
Alt.	Interchangeable	Interchangeable	Y2 AC300V, 4700pF, T125	IEC/EN 60384-14	VDE or other Valid approval
Current Fuse	Dongguan Better Electronics Technology Co Ltd	524	AC250V, 12A	IEC 60127-1: 2006 + A1: 2011 + A2: 2015 IEC 60127-2: 2014 EN 60127-1: 2006 + A1: 2011 + A2: 2015 EN 60127-2: 2014	TUV Rd J5015755 2

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
Alt.	Shanghai Songshan Electronics Co.,Ltd.	RF1-20	AC250V, 12A	IEC 60127-1: 2006 + A1: 2011 + A2: 2015 IEC 60127-2: 2014 EN 60127-1: 2006 + A1: 2011 + A2: 2015 EN 60127-2: 2014	TUV Rd J5007889 4
Alt.	Sun Electric Co.	5C	AC250V, 12A	IEC 60127-1: 2006 + A1: 2011 + A2: 2015 IEC 60127-2: 2014 EN 60127-1: 2006 + A1: 2011 + A2: 2015 EN 60127-2: 2014	TUV Rd R 50202839
Alt.	XC Electronics (shenzhen) Corp.Ltd	5C	AC250V, 12A	IEC/EN 60335-1 IEC/EN 60335-2-90	UL E249609 Tested with appliance
Alt.	Shanghai Songshan Electronics Co.,Ltd.	RT1-20	AC250V, 12A	IEC 60127-1: 2006 + A1: 2011 + A2: 2015 IEC 60127-2: 2014 EN 60127-1: 2006 + A1: 2011 + A2: 2015 EN 60127-2: 2014	TUV Rd J 50287669
Alt.	Dongguan Better Electronics Technology Co., Ltd.	522	AC250V, 12A	IEC 60127-1: 2006 + A1: 2011 + A2: 2015 IEC 60127-2: 2014 EN 60127-1: 2006 + A1: 2011 + A2: 2015 EN 60127-2: 2014	TUV Rd J 50415641
Components of Control Panel PCB from Galanz, are listed as below for panel PCB model:					
Relay for microwave, main, VPC-fan	Xiamen Hongfa Electroacoustic Co. Ltd.	JQX-62F-012-1H	Contact:AC250V 16A Coil: DC12V T85 or T105	IEC 61810-1: 2015 + A1: 2019 EN 61810-1: 2015 + A1: 2020	TUV Rd R5014708 6
Alt.	Galanz	JD2-1A	Contact:AC250V 16A Coil: DC12V T85	IEC 61810-1: 2015 + A1: 2019 EN 61810-1: 2015 + A1: 2020	TUV Rd R5018920 4
Alt.	Ningbo Tianbo Ganglian Electronics Co., Ltd	TRA2F-12VDC-H	Contact:AC250V 16A Coil: DC12V T85	IEC 61810-1: 2015 + A1: 2019 EN 61810-1: 2015 + A1: 2020	TUV Rd R5011313 8
Alt.	Zhejiang Meishuo Electric Technology Co.,LTD	MPL-112-A	Contact:AC250V 16A Coil: DC12V T85 or T105	IEC 61810-1: 2015 + A1: 2019 EN 61810-1: 2015 + A1: 2020	TUV Rd R5023689 2
Alt.	Sanyou Corporation Limited	SMIH-S-112LM-F	Contact:AC250V 16A Coil: DC12V T85 or T105	IEC 61810-1: 2015 + A1: 2019 EN 61810-1: 2015 + A1: 2020	VDE 40034054
Switch mode power supply PCB incorporated in control panel PCB:					

IEC 60335-2-90					
Clause	Requirement + Test		Result - Remark		Verdict
High frequency transformer	Galanz	GAL-TR006	Pri. winding: N1: $\Phi 0,17\text{mm} \times 37\text{Ts}$ N2: $\Phi 0,17\text{mm} \times 111\text{Ts}$ N3: $\Phi 0,17\text{mm} \times 0,9\text{Ts}$ Sec. winding: N4: $\Phi 0,35\text{mm} \times 6\text{Ts}$ N5: $\Phi 0,40\text{mm} \times 8\text{Ts}$ Class B	IEC 61558-1: 2005 + A1: 2009 IEC 61558-2-16: 2009 + A1: 2013 IEC/EN 60335-1 IEC/EN 60335-2-90	Tested with appliance
Varistor	Fenghua Adv.Tech.(Holding)Co.,Ltd.	FNR-10K471 FNR-14K471	Varistor Voltage: 470V, T85 or T105	IEC 61051-1:2018 IEC 61051-2:2021 IEC 61051-2-2:1991 EN IEC 61051-1:2018 EN IEC 61051-2:2021	VDE 40008242
Alt.	Haohua Electronic Co.,	HVR 10K471, HVR 14K471	Varistor Voltage: 470V, T85	IEC 61051-1:2007 IEC 61051-2:1991 + A1: 2009 IEC 61051-2-2:1991	VDE 40031718
Alt.	Centra Science Corp.	CNR-10D471K CNR-14D471K	Varistor Voltage: 470V, T85 or T105 or T125	IEC 61051-1:2018 IEC 61051-2:2021 IEC 61051-2-2:1991 EN IEC 61051-1:2018 EN IEC 61051-2:2021	VDE 40008220
Alt.	GUANGDONG DAFU ELECTRONICS CO., LTD	NDF-10D471K NDF-14D471K	Varistor Voltage: 470V, T85 or T105 or T125	IEC 61051-1:2007 IEC 61051-2:1991 + A1: 2009 IEC 61051-2-2:1991	VDE 40050909
Alt.	Fujian Qiaoguang Electronic Technology co., Ltd.	FTR 10D471K FTR 14D471K	Varistor Voltage: 470V, T125	IEC 61051-1:2018 IEC 61051-2:2021 IEC 61051-2-2:1991 EN IEC 61051-1:2018 EN IEC 61051-2:2021	VDE 40051843
Optocoupler	Sharp Corporation, Sakai Factory	PC817	Viso=5000V, T100	IEC 60747-5-5: 2020 EN IEC 60747-5-5:2020	VDE 40008087
Alt.	Lite-On Technology Corporation	LTV-817	Viso=5000V, T110	IEC 60747-5-5: 2020 EN IEC 60747-5-5:2020	VDE 40015248
Alt.	Everlight Electronics Co., Ltd.	EL817	Viso=5000V, T110	IEC 60747-5-5: 2020 EN IEC 60747-5-5:2020	VDE 132249

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Clause	Requirement + Test	Result - Remark	Verdict
28.1	TABLE: Threaded part torque test1		P
Threaded part identification:	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Screw of earthing connection	3,8	II	1,2
Supplementary information:			

29.1	TABLE: Clearances					P
	Overvoltage category.....: II					—
		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark
330	0,2* / 0,5 / 0,8**	—	—	—	—	N/A
500	0,2* / 0,5 / 0,8**	—	—	—	—	N/A
800	0,2* / 0,5 / 0,8**	—	—	—	—	N/A
1 500	0,5 / 0,8** / 1,0***	—	—	—	—	N/A
2 500	1,5 / 2,0***	4,5 a) 3,5 b) 7,5 c)	4,6 e)	—	4,4 f)	P
4 000	3,0 / 3,5***	—	—	4,7 g)	—	P
6 000	5,5 / 6,0***	26,3 d) 23,5 h)	—	—	—	P
8 000	8,0 / 8,5***	—	—	—	—	N/A
10 000	11,0 / 11,5***	—	—	—	—	N/A

Supplementary information:

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

**) For pollution degree 3

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

a): B/W live part and earthed metal part on noise filter PCB;

b): B/W fan motor winding and iron core;

c): B/W turntable motor winding and iron core;

d): B/W H.V. transformer secondary winding and earthed iron core;

e): B/W internal wire and accessible part;

f): B/W live and neutral on noise filter PCB;

g): B/W live part and SELV part on control panel;

h): B/W terminal of magnetron and earthed metal part;

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

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Clause	Requirement + Test						Result - Remark			Verdict	
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A
Supplementary information:											
*) Material group IIIb is allowed if the working voltage does not exceed 50 V											
**) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation											

29.2	TABLE: Creepage distances, functional insulation								P
Working voltage (V)	Creepage distance (mm) Pollution degree								
	1	2			3				
		Material group			Material group				
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	Verdict / Remark	
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A	
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	N/A	
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	N/A	
250	0,42	1,0	1,4	2,0	2,5	2,8	3,2	4,4 f) / P	
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	N/A	
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A	
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A	
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A	
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A	
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A	
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A	
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A	
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A	
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A	
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A	
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A	
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A	
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A	
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A	
Supplementary information:									
*) Material group IIIb is allowed if the working voltage does not exceed 50 V									

IEC 60335-2-90			
Clause	Requirement + Test	Result - Remark	Verdict

30.1	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm) :		2,0		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Fan motor bobbin	Galanz	125	1,4	
Turntable motor bobbin	Galanz	125	1,5	
Plastic material used for control panel and door cover (ABS)	Galanz	100 ¹⁾	1,6	
Plastic material used for control panel and door cover (PC)	Galanz	100 ¹⁾	1,5	
Plastic material used for control panel and door cover (PP)	Galanz	100 ¹⁾	1,5	
Plastic supporting frame for micro switch and noise filter board (PBT)	Galanz	125 ¹⁾	1,6	
Plastic supporting frame for micro switch and noise filter board (PP)	Galanz	125 ¹⁾	1,6	
Plastic supporting frame for micro switch and noise filter board (PC)	Galanz	125 ¹⁾	1,6	
Lamp and holder	Deqing New MinghuiElectric Lighting Co.,Ltd.	160 ¹⁾	1,3	
Lamp and holder	Ningbo Jiahong Lighting And Technology Co Ltd	160 ¹⁾	1,3	
Lamp and holder	DeqingDinghui Lighting Co.,Ltd.	160 ¹⁾	1,4	
Lamp and holder	Dongguan HeYu Lighting Products Co., Ltd.	160 ¹⁾	1,2	
Lamp and holder	MLS CO., LTD	160 ¹⁾	1,3	
High frequency transformer	Galanz	125	1,4	
Magnetron plastic	Galanz	125	1,6	
H.V. Fuse holder	Galanz	125	1,3	
Supplementary information:				
¹⁾ Tested at higher temperature than required.				

IEC 60335-2-90								
Clause	Requirement + Test				Result - Remark			Verdict
30.2	TABLE: Resistance to heat and fire - Glow wire tests							P
Object/ Part No./ Material	Manufacturer / trademark	Glow wire test (GWT); (°C)						Verdict
		550	650		750		850	
			te	ti	te	ti		
Fan motor bobbin	Galanz		0s	0s				P
Turntable motor bobbin	Galanz		0s	0s				P
All Lamp and holder	See table 24.1				0s	0s	x	P
All plastic material used for control panel and door cover	See table 24.1	x No ignited						P
All plastic supporting frame for micro switch and noise filter board	See table 24.1	x No ignited						P
High frequency transformer	GALANZ				0s	0s	x	P
Magnetron plastic	Galanz				4s	1s	x	P
All relay	See table 24.1				0s	0s	x	P
All x2 capacitor	See table 24.1		0s	0s				P
All self-set thermal cut-out	See table 24.1				0s	0s	x	P
All micro switch	See table 24.1				0s	0s	x	P
Connector on PCB	Galanz				0s	0s	x	P
All terminal tubes	Galanz				0s	0s	x	P
Object/ Part No./ Material	Manufacturer / trademark	Glow-wire flammability index (GWFI), °C				GW ignition temp. (GWIT), °C		Verdict
		550	650	750	850	675	775	

IEC 60335-2-90							
Clause	Requirement + Test				Result - Remark		Verdict
The test specimen passed the glow wire test (GWT) with no ignition $[(t_e - t_i) \leq 2s]$ (Yes/No):							No
If no, then surrounding parts passed the needle-flame test of annex E (Yes/No)..... :							Yes
The test specimen passed the test by virtue of most of the flaming material being withdrawn with the glow-wire (Yes/No)?.....:							N/A
Ignition of the specified layer placed underneath the test specimen (Yes/No)							No
Supplementary information: - 550 °C GWT not relevant (or applicable) to parts of material classified at least HB40 or if relevant HBF - The GWIT pre-selection option, the 850 °C GWFI pre-selection option, and the 850 °C GWT are not relevant (or applicable) for attended appliances							

30.2/30.2.4	TABLE: Needle- flame test (NFT)				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
All PCBs	See table 24.1	30	No	0s	P
Magnetron plastic	Galanz	30	No	0s	P
Magnetron terminal tube	Galanz	30	No	0s	P
Supplementary information: - NFT not relevant (or applicable) for Parts of material classified as V-0 or V-1 - NFT not relevant (or applicable) for Base material of PCBs classified as V-0 or if relevant VTM-0					

-- End of report --

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60335-1:2010, IEC 60335-1:2010/AMD1:2013, IEC 60335-1:2010/AMD2:2016 IEC 60335-2-90:2015, IEC 60335-2-90:2015/AMD1:2019 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Household and similar electrical appliances – Safety – Part 2: Particular requirements for commercial microwave ovens			
Differences according to.....:	EN IEC 60335-2-90:2021 + A1:2021 EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 EN 62233:2008 + AC:2008		
TRF template used	IECEE OD-2020-F2:2020, Ed. 1.2		
Attachment Form No.....:	EU_GD_IEC60335_2_90J		
Attachment Originator	Nemko Group AS		
Master Attachment.....:	2023-06-09		
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	CENELEC COMMON MODIFICATIONS (EN)		--
6.1	Delete “class 0” and “class 01”		P
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
7.12	The instructions include the substance of the following:		--
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test, except that		P
	appliances normally used on the floor and having a mass exceeding 40 kg are not tilted		N/A

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		N/A
8.1.3	Instead of test probe B, test probe 18 and test probe 13, for appliances other than those of class II, test probe 41 of IEC 61032 is applied with a force not exceeding 1 N to live parts of visibly glowing heating elements, all poles of which can be disconnected by a single switching action		N/A
8.2	Compliance is checked by inspection and by applying the test probes of EN 61032 in accordance with the conditions specified in 8.1.1		P
	Test probe B and probe 18 of EN 61032 are applied to built-in appliances and fixed appliances only after installation		N/A
11.7	Add the following text after the first sentence: (EN 60335-2-90/A1)		--
	The last cycle does not include a rest period of 1 min. (EN 60335-2-90/A1)		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
15.2	Replace the text of the addition with the following: (EN 60335-2-90/A1)		--
	A quantity of 0,5 l of the same spillage solution is poured steadily over the shelf over a period of 1 min. (EN 60335-2-90/A1)		P
	If the shelf can collect spilled liquid, it is filled with the solution and a further 0,5 l is then added over a period of 1 min. (EN 60335-2-90/A1)		P
15.101	Replace the first and second paragraph of the compliance criterion with the following: (EN 60335-2-90/A1)		--
	The probe is completely immersed in water containing approximately 1 % NaCl and having a temperature of 20 °C ± 5 °C. The solution is heated to the boiling point in approximately 15 min. (EN 60335-2-90/A1)		N/A
	The probe is then removed from the boiling solution and immersed in the solution having a temperature of 20 °C ± 5 °C for 30 min. (EN 60335-2-90/A1)		N/A

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	This procedure is carried out five times, after which the probe is removed from the solution. (EN 60335-2-90/A1)		N/A
	All traces of liquid are then removed from the surface. (EN 60335-2-90/A1)		N/A
	Replace the Note with the following: (EN 60335-2-90/A1)		--
	NOTE Detachable temperature-sensing probes are not connected to the appliance for this test. Non-detachable temperature-sensing probes are tested in the cavity, the probe being immersed as much as possible. (EN 60335-2-90/A1)		N/A
19.13	Replace the first sentence of the first paragraph with the following. (EN 60335-2-90/A1)		--
	During the tests, the temperature of windings does not exceed the values shown in Table 8. (EN 60335-2-90/A1)		P
19.101	Add the following text after the last paragraph: (EN 60335-2-90/A1)		--
	If microwave leakage exceeds 100 W/m ² , the following alternative measurement method is applied, which modifies the microwave leakage limit of 19.13. (EN 60335-2-90/A1)		N/A
	In order to identify and mark all spots where peak values of microwave leakage exceed 100 W/m ² , the instrument antenna is moved again over the external surface of the appliance, particular attention being given to the door and its seals. (EN 60335-2-90/A1)		N/A
	NOTE 1 A peak hold function of the measurement instrument, if any, can be activated for identification of spots where peak values of microwave leakage exceeds 100 W/m ² . (EN 60335-2-90/A1)		N/A
	The leakage values of each such spot are recorded and the averaged leakage value of any spot over the most onerous 20 s does not exceed 100 W/m ² . Furthermore, the peak value does not exceed 500 W/m ² . (EN 60335-2-90/A1)		N/A
	NOTE 2 Since the stirrer and/or turntable revolution time and the number of microwave stirrer blades determine the frequency and duration of actual peak leakage values, instruments with appropriate specifications (like minimum sampling time, capability to measure peak values of power flux density, capability to average these values) can be used. (EN 60335-2-90/A1)		N/A

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
19.102	Replace the current NOTE with the same normative text and add the following text: (EN 60335-2-90/A1)		--
	These short-circuits are applied one at a time. (EN 60335-2-90/A1)		P
19.104	Replace Table 101 (EN 60335-2-90/A1)		P
20.2	For appliances having hazardous moving parts, due to their working function, e.g. the needle of a sewing machine, tools of kitchen machines or the blade of an electrical knife, full protection is not possible for performing their intended use		P
	When using a test probe similar to test probe B of EN 61032, having a circular stop face and applied with a force of 5N, the accessories and detachable covers are removed		P
	When using test probe 18 it is applied with a force of 2,5N on the appliance fully assembled		P
20.101	Replace the fifth paragraph with the following: (EN 60335-2-90/A1)		--
	For appliances normally used on a table, the mass is - 7 kg for stationary appliances; - 3,5 kg for portable appliances. (EN 60335-2-90/A1)		N/A
21	Add, before 21.101, the following new Subclause 21.2: (EN 60335-2-90/A1)		--
21.1	Delete this subclause. (EN 60335-2-90/A1)		P
21.2	Compliance is also checked by the tests of 21.101 to 21.105. (EN 60335-2-90/A1)		P
	During these tests, the appliance is rigidly supported, except for 21.102. (EN 60335-2-90/A1)		P
22.12	Other parts intended to be detached during use, maintenance or cleaning (e.g. batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers		N/A
22.17	The requirement is not applicable to built-in appliances		P
22.44	An appliance is child-appealing if one of the following criteria is present:		--
	- appliance decorated using faces, cartoon like characters, or similar images		N/A
	- appliance using shapes representing animals, characters, persons or scale models		N/A
	An appliance is child-appealing if more than one of the following criteria are present:		--

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	- using non-functional light (functional light is e.g. illumination of an object or area, signal indicating status of an appliance)		N/A
	- using non-functional sound (e.g. music)		N/A
	- using non-functional movement		N/A
	If the appliance is child-appealing, has a mass less than 4 kg or is mounted or normally intended for use at a height less than 850 mm, the following conditions shall be met:		--
	- surface temperature rise requirements not exceeded		N/A
	- hazardous moving parts not accessible		N/A
	- live parts not accessible		N/A
	- liquid temperature requirement not exceeded,		N/A
	unless for vessels in which two independent and sequential actions are needed to access the liquid		N/A
	- the requirement of 22.12 is applicable for all accessible parts of the appliance		N/A
22.102	Replace the first paragraph with the following: (EN 60335-2-90/A1)		--
	Oven vents are constructed so that any moisture or grease discharged through them cannot affect clearances and creepage distances between live parts and other parts of the appliance. (EN 60335-2-90/A1)		P
22.106	Replace the first paragraph with the following: (EN 60335-2-90/A1)		--
	The supervision device of each monitored door interlock render the appliance inoperable if its switching part fails to control the microwave generator. (EN 60335-2-90/A1)		P
	Replace Note 4 with the following: (EN 60335-2-90/A1)		--
	NOTE 4 For appliances having a rated voltage under 150 V and those with a rated current over 20 A, the test with the series impedance is not carried out. (EN 60335-2-90/A1)		N/A
22.112	Replace the third sentence of first paragraph of the compliance criterion with the following: (EN 60335-2-90/A1)		--
	The force is then released and, if the oven can be operated with the temperature-sensing probe still being placed in the trapped position, the microwave leakage is measured under the conditions specified in Clause 32 and does not exceed 100 W/m ² . (EN 60335-2-90/A1)		N/A
22.117	Replace this subclause with the following: (EN 60335-2-90/A1)		--

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	Where interlocks are required to comply with this standard and are operated by detachable parts, they are guarded so that accidental operation is prevented. (EN 60335-2-90/A1)		N/A
	Compliance is checked by inspection and by manual test with test probe B. (EN 60335-2-90/A1)		N/A
22.118	Replace the requirement with the following: (EN 60335-2-90/A1)		--
	Lights, switches or push-buttons for the indication of danger, alarm or similar situations are coloured red. (EN 60335-2-90/A1)		N/A
22.121	Add the following new subclause: (EN 60335-2-90/A1)		--
	For appliances that are controlled by programmable electronic circuits that limit the number of heating elements and motors from being energised at the same time, simultaneous activation of any combination of heating elements and motors does not render the appliance unsafe. (EN 60335-2-90/A1)		N/A
	Compliance is checked as follows: (EN 60335-2-90/A1)		--
	- the fault/error conditions specified in Table R.1 are applied and evaluated in accordance with the relevant requirements of Annex R; or (EN 60335-2-90/A1)		N/A
	- the appliance is operated under conditions of Clause 11 while being supplied at rated voltage, the programmable electronic circuits being modified to allow simultaneous activation of all heaters and motors under their control. (EN 60335-2-90/A1)		N/A
	Under these conditions, compliance with 19.13 shall be fulfilled. (EN 60335-2-90/A1)		N/A
24.1	Components comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply		P
	Motors are not required to comply with EN 60034-1, but tested as part of the appliance according to this standard		P
	Relays are tested as part of the appliance according to this standard		P
	Relays may be alternatively tested to EN 60730-1 and the additional requirements in EN 60335-1		P
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance		P

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	Components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard		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 tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard		P
	Components that have been tested and shown to comply with the resistance to fire requirements in the EN 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 the values of t_e and t_i acc. to EN 60695-2-11		N/A
	If the above two conditions are not satisfied, the component is tested as part of the appliance		N/A
	Power electronic converter circuits are not required to comply with EN 62477-1, but tested as part of the appliance according to this standard		N/A
	Unless components have been tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components that have not been tested and found to comply with the relevant EN standard, and		P
	components that are not marked or not used in accordance with their marking,		P
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		P
	Lamp-holders and starter-holders that have not been tested and found to comply with the relevant EN standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance		N/A

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		N/A
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard		N/A
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		P
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if		N/A
	direct supply to these parts from the supply mains gives rise to a hazard		N/A
	For plugs used in CENELEC countries Annex ZH applies		P
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1		N/A
25.1	Plugs and pins for insertion into socket outlets follow the relevant standards sheets in Annex ZH		P
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors, or		N/A
	when they are liable to be exposed to significant amount of ultraviolet radiation		N/A
25.25	Instead of IEC/TR 60083, dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are in accordance with the dimensions of the relevant plug standard		N/A
	Common plugs and socket-outlets types in CENELEC countries as shown in Annex ZH		P
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,		P
	unless they are held in place near the terminals independently of the solder		N/A
27.1	Add the following new subclause: (EN 60335-2-90/A1)		--

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE 101 For class I appliances, one pole of the output of power supply of microwave generator, if any, is earthed for functional purposes. (EN 60335-2-90/A1)		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		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 any of the tests is as specified in 19.7		N/A
ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS (EN)		--
	Denmark, Sweden, Norway and Finland		--
7.12.8	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Norway		--
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
	Norway		--
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A
	Denmark		--
22.47	The maximum inlet water pressure is at least 1,0 MPa		N/A
	Ireland, United Kingdom and Cyprus		--
25.8	In the table, the line >10 A and ≤16 A is replaced with:		--
	> 10 and ≤ 13 1,25 (1,0) ^b		P

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	> 13 and ≤ 16 1,5 (1,0) ^b		P
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		--
	Ireland		--
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		--
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		P
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		P
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		--
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		P
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		--
	List of IEC and CENELEC code designations for flexible cords		P
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE		--
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative		P
	Model or type reference		P
	Serial number, if any		N/A
	Production year		P

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	Designation of the appliance		P
7.12	Instructions provided with the appliance so that the appliance can be used safely		P
	The instructions contain at least the following information:		--
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		P
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		P
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		P
	- the general description of the appliance, when needed due to the complexity of the appliance		N/A
	- specific precautions required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving		P
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		P
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		P
	The words "Original instructions" appear on the language version(s) verified by the manufacturer or by the authorized representative		P
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence "Translation of the original instructions" appear in the relevant instructions delivered with the appliance		N/A
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand		P
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures		P
7.12.ZE1	If needed for specific appliances, the following information to be given:		--

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	- on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts		P
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		P
	- on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided		N/A
	- on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance		P
	- on the specifications on the spare parts to be used, when these affect the health and safety of the operator		N/A
	- on airborne noise emissions, determined and declared in accordance with the relevant Part 2, which includes:		--
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A).....;		N/A
	- where this level does not exceed 70 dB(A), this fact is indicated		P
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 µPa).....:		N/A
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A).....:		N/A
7.12.ZE2	The instructions include a warning to disconnect the appliance from its power source during service and when replacing parts		P
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug is such that an operator can check from any of the points to which he has access that the plug remains removed		P

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N/A
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N/A
	a manual operation is required to restart it		N/A
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		P
20.2	Dangerous moving transmission parts safeguarded either by design or guards		P
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		P
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		--
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N/A
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N/A
	Interlocking movable guards used where frequent access is required		N/A
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		P
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N/A
	The distance between the seat and the control devices capable of being adapted to the operator		N/A
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N/A
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N/A

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		P
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N/A
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or		N/A
	so designed that they can be fitted with such attachments, or		N/A
	be shaped in such a way that standard lifting gear can easily be used		N/A
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely		N/A
22.ZE.5	The fixing systems of fixed guards which prevent access to dangerous moving transmission parts only removable with the use of tools		N/A
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N/A
	Where possible, guards are incapable of remaining in place without their fixings		N/A
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N/A
	Movable guards are interlocked		N/A
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N/A
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		--
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N/A
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N/A
	Interlocking movable guards remain attached to the appliance when open, and		N/A

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N/A
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions		N/A
	The guard is opened to the extent needed to cause the interlocking to operate and is then closed, the number of operations being defined in the specific Part 2.....:		N/A
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N/A
	After these tests the interlock system is fit for further use		N/A
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		--
	- adjustable manually or automatically, depending on the type of work involved, and		N/A
	- readily adjustable without the use of tools		N/A
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		P
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N/A
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N/A
	Such isolators are clearly identified, and		N/A
	they are capable of being locked if reconnection endanger persons		N/A
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N/A
			--
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD		--

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive)		P
ZG	ANNEX ZG (NORMATIVE) UV APPLIANCES		--
	The following modifications to this standard apply to appliances having UV emitters		N/A
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109		N/A
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source		N/A
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant		N/A
ZH	ANNEX ZH (INFORMATIVE) Common plug and socket-outlet types in CENELEC countries		--
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:		--
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4		P
	- for class II appliances, standard sheet EU5, EU6 or EU7		N/A
	There are exemptions or differences in certain CENELEC countries		P
ZI	ANNEX ZI (INFORMATIVE) Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A		--
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1		P
ZZA	ANNEX ZZA (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96] AIMED TO BE COVERED		--

ATTACHMENT to TRF IEC60335_2_90J			
Clause	Requirement + Test	Result - Remark	Verdict
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		P
ZZB	ANNEX ZZB (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED		--
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		N/A
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		N/A
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		N/A
	ANNEX EN 62233:2008 + AC:2008 EMF- ELECTROMAGNETICS FIELDS		--
	The tested product also complies with the requirements of EN 62233:2008		--
	Limit100%	Measured max.: 11,266 %	P

-- End of this attachment --

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60335-1:2010, IEC 60335-1:2010/AMD1:2013, IEC 60335-1:2010/AMD2:2016 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Household and similar electrical appliances – Safety – Part 1: GENERAL REQUIREMENTS			
Differences according to	EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 + A16:2023 EN 62233:2008		
TRF template used	IECEE OD-2020-F2:2022, Ed. 1.2		
Attachment Form No.....	EU_GD_IEC60335_1X_III		
Attachment Originator	Nemko Group AS		
Master Attachment.....	Dated 2024-01-19		
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	CENELEC COMMON MODIFICATIONS (EN)		--
6.1	Delete “class 0” and “class 01”		P
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered	230 V - 240 V	P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
7.12	The instructions include the substance of the following:		--
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
8.1.1	Also test probe 18 of EN 61032 is applied		--
	The appliance being in every possible position during the test, except that		P
	appliances normally used on the floor and having a mass exceeding 40 kg are not tilted		N/A
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		N/A
8.1.3	Instead of test probe B, test probe 18 and test probe 13, for appliances other than those of class II, test probe 41 of IEC 61032 is applied with a force not exceeding 1 N to live parts of visibly glowing heating elements, all poles of which can be disconnected by a single switching action		N/A
8.2	Compliance is checked by inspection and by applying the test probes of EN 61032 in accordance with the conditions specified in 8.1.1		P
	Test probe B and probe 18 of EN 61032 are applied to built-in appliances and fixed appliances only after installation		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	For appliances having hazardous moving parts, due to their working function, e.g. the needle of a sewing machine, tools of kitchen machines or the blade of an electrical knife, full protection is not possible for performing their intended use		P
	When using a test probe similar to test probe B of EN 61032, having a circular stop face and applied with a force of 5N, the accessories and detachable covers are removed		P
	When using test probe 18 it is applied with a force of 2,5N on the appliance fully assembled		P
22.12	Other parts intended to be detached during use, maintenance or cleaning (e.g. batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers		P
22.17	The requirement is not applicable to built-in appliances		N/A
22.44	An appliance is child-appealing if one of the following criteria is present:		--
	- appliance decorated using faces, cartoon like characters, or similar images		N/A

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	- appliance using shapes representing animals, characters, persons or scale models		N/A
	An appliance is child-appealing if more than one of the following criteria are present:		--
	- using non-functional light (functional light is e.g. illumination of an object or area, signal indicating status of an appliance)		N/A
	- using non-functional sound (e.g. music)		N/A
	- using non-functional movement		N/A
	If the appliance is child-appealing and		--
	- has a mass less than 4 kg, and		N/A
	- is mounted or normally intended for use at a height less than 850 mm,		N/A
	the following conditions are met:		N/A
	- surface temperature rise requirements not exceeded		N/A
	- hazardous moving parts not accessible		N/A
	- live parts not accessible		N/A
	- liquid temperature requirement not exceeded,		N/A
	unless for vessels in which two independent and sequential actions are needed to access the liquid		N/A
	- the requirement of 22.12 is applicable for all accessible parts of the appliance		N/A
24.1	Components comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply		P
	Motors are not required to comply with EN 60034-1, but tested as part of the appliance according to this standard		P
	Relays are tested as part of the appliance according to this standard		N/A
	Relays may be alternatively tested to EN 60730-1 and the additional requirements in EN 60335-1		N/A
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance		P
	Components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard		P

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	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 tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard		P
	Components that have been tested and shown to comply with the resistance to fire requirements in the EN 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 the values of t_e and t_i acc. to EN 60695-2-11		N/A
	If the above two conditions are not satisfied, the component is tested as part of the appliance		P
	Power electronic converter circuits are not required to comply with EN 62477-1, but tested as part of the appliance according to this standard		N/A
	Unless components have been tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		P
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components that have not been tested and found to comply with the relevant EN standard, and		P
	components that are not marked or not used in accordance with their marking,		P
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		P
	Lamp-holders and starter-holders that have not been tested and found to comply with the relevant EN standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance		N/A

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		P
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard		N/A
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		N/A
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if		N/A
	direct supply to these parts from the supply mains gives rise to a hazard		N/A
	For plugs used in CENELEC countries Annex ZH applies		N/A
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1		P
25.1	Plugs and pins for insertion into socket outlets follow the relevant standards sheets in Annex ZH		N/A
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors, or		N/A
	when they are liable to be exposed to significant amount of ultraviolet radiation		N/A
25.25	Instead of IEC/TR 60083, dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are in accordance with the dimensions of the relevant plug standard		N/A
	Common plugs and socket-outlets types in CENELEC countries as shown in Annex ZH		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,		P
	unless they are held in place near the terminals independently of the solder		N/A

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N/A
32	Compliance regarding electromagnetic fields is checked according to EN 62233		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 any of the tests is as specified in 19.7		N/A
ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS (EN)		--
	Denmark, Sweden, Norway and Finland		--
7.12.8	The maximum inlet water pressure is at least 1,0 MPa		Not check
	Norway		--
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		Not check
	Norway		--
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		Not check
	Denmark		--
22.47	The maximum inlet water pressure is at least 1,0 MPa		Not check
	Ireland, United Kingdom and Cyprus		--
25.8	In the table, the line >10 A and ≤16 A is replaced with:		--
	> 10 and ≤ 13 1,25 (1,0) ^b		P
	> 13 and ≤ 16 1,5 (1,0) ^b		P

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		--
	Ireland		--
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		Not check
	United Kingdom		--
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		P
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		P
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		--
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		P
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		--
	List of IEC and CENELEC code designations for flexible cords		P
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE		--
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative		P
	Model or type reference		P
	Serial number, if any		N/A
	Production year		P

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	Designation of the appliance		N/A
7.12	Instructions provided with the appliance so that the appliance can be used safely		P
	The instructions contain at least the following information:		--
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		P
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		P
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		P
	- the general description of the appliance, when needed due to the complexity of the appliance		N/A
	- specific precautions required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving		P
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		P
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		P
	The words "Original instructions" appear on the language version(s) verified by the manufacturer or by the authorized representative		P
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence "Translation of the original instructions" appear in the relevant instructions delivered with the appliance		N/A
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand		P
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures		P
7.12.ZE1	If needed for specific appliances, the following information to be given:		--

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	- on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts		P
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		P
	- on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided		N/A
	- on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance		P
	- on the specifications on the spare parts to be used, when these affect the health and safety of the operator		N/A
	- on airborne noise emissions, determined and declared in accordance with the relevant Part 2, which includes:		--
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A).....;		N/A
	- where this level does not exceed 70 dB(A), this fact is indicated		P
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 µPa).....:		N/A
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A).....:		N/A
7.12.ZE2	The instructions include a warning to disconnect the appliance from its power source during service and when replacing parts		P
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug is such that an operator can check from any of the points to which he has access that the plug remains removed		P

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N/A
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N/A
	a manual operation is required to restart it		N/A
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		P
20.2	Dangerous moving transmission parts safeguarded either by design or guards		P
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		P
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		--
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N/A
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N/A
	Interlocking movable guards used where frequent access is required		N/A
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		P
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N/A
	The distance between the seat and the control devices capable of being adapted to the operator		N/A
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N/A

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N/A
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		P
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N/A
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or		N/A
	so designed that they can be fitted with such attachments, or		N/A
	be shaped in such a way that standard lifting gear can easily be used		N/A
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely		N/A
22.ZE.5	The fixing systems of fixed guards which prevent access to hazardous moving transmission parts only removable with the use of tools		N/A
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N/A
	Where possible, guards are incapable of remaining in place without their fixings		N/A
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N/A
	Movable guards are interlocked		N/A
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N/A
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		--
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N/A

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N/A
	Interlocking movable guards remain attached to the appliance when open, and		N/A
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N/A
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions		N/A
	The guard is opened to the extent needed to cause the interlocking to operate and is then closed, the number of operations being defined in the specific Part 2.....:		N/A
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N/A
	After these tests the interlock system is fit for further use		N/A
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		--
	- adjustable manually or automatically, depending on the type of work involved, and		N/A
	- readily adjustable without the use of tools		N/A
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		P
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N/A
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N/A
	Such isolators are clearly identified, and		N/A
	they are capable of being locked if reconnection endanger persons		N/A

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N/A
22.ZE.10	Noise reduction is achieved by applying measures at source to control noise, for example EN ISO 11688-1:2009		N/A
	The success of the applied noise reduction measures is assessed based on the actual noise emission values in relation to other machines of the same type with comparable non-acoustical technical data		N/A
	Compliance is checked by the noise test code, if any, given in part 2		N/A
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD		--
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive)		P
ZG	ANNEX ZG (NORMATIVE) UV APPLIANCES		--
	The following modifications to this standard apply to appliances having UV emitters		N/A
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109		N/A
7.12.ZG	The instructions for appliances incorporating UVC emitters include the substance of the following: WARNING — This appliance contains a UV emitter. Do not stare at the light source		N/A
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant		N/A
ZH	ANNEX ZH (INFORMATIVE) Common plug and socket-outlet types in CENELEC countries		--
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:		--

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4		P
	- for class II appliances, standard sheet EU5, EU6 or EU7		N/A
	There are exemptions or differences in certain CENELEC countries		P
ZI	ANNEX ZI (INFORMATIVE) Information on the application of A11:2014 to EN 60335-1:2012 CENELEC CLC/TC 61(SEC)2096A		--
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1		N/A
ZZA	ANNEX ZZA (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96] AIMED TO BE COVERED		--
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		P
ZZB	ANNEX ZZB (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED		--
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		N/A
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		N/A

ATTACHMENT TO TRF IEC60335_1X			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		N/A
	ANNEX EN 62233:2008 + AC:2008 EMF- ELECTROMAGNETICS FIELDS		--
	The tested product also complies with the requirements of EN 62233:2008		--
	Limit100%	Measured max. : 11,266 %	P

--- End of this attachment ---

Photos

Type of equipment: Microwave oven / P110M25AL-5S, P110M25ASL-5S

Details of: Front view

View:

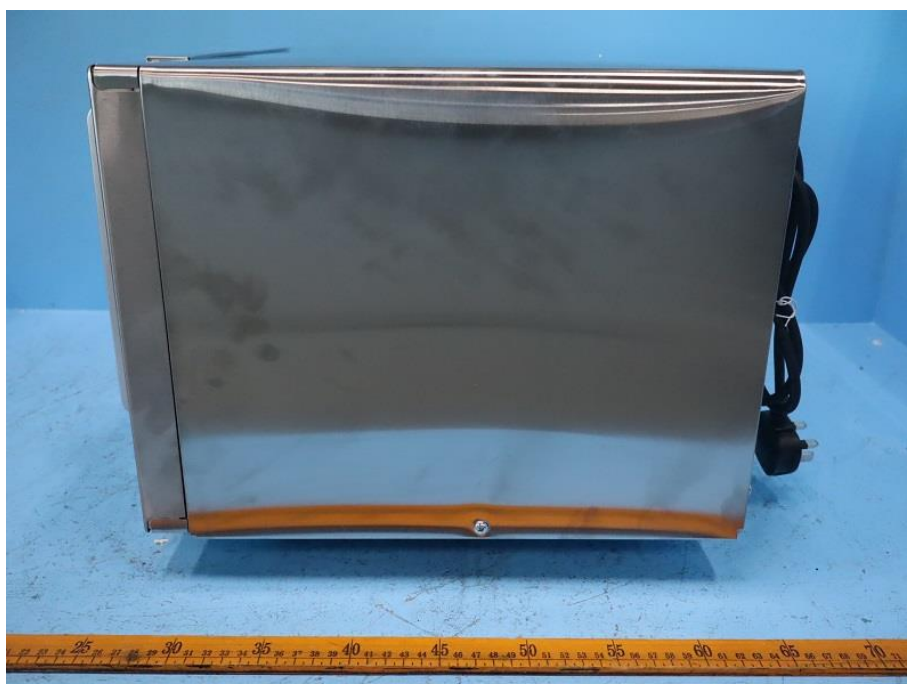
- ☒ general
- ☒ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Right view

View:

- ☒ general
- ☐ front
- ☐ rear
- ☒ right
- ☐ left
- ☐ top
- ☐ bottom



Attachment 3

Details of: Left view

View:

- ☒ general
☐ front
☐ rear
☐ right
☒ left
☐ top
☐ bottom

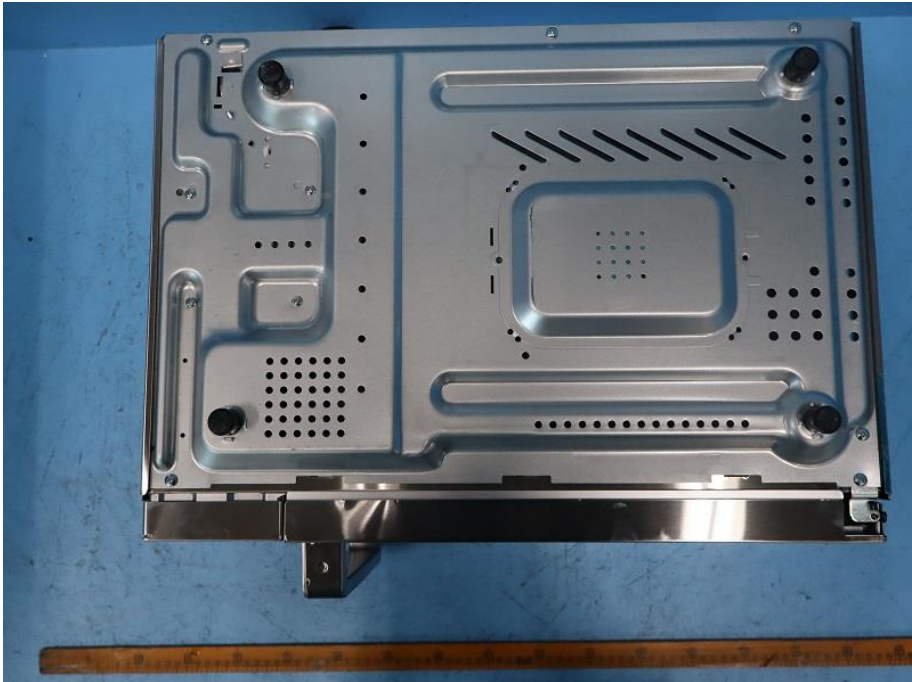
Details of: Top view

View:

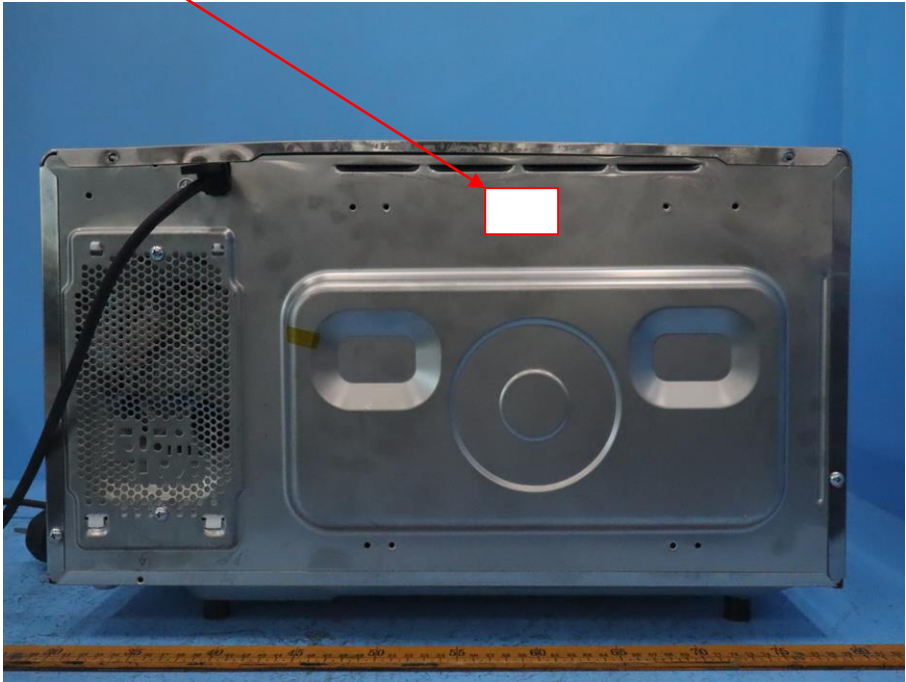
- ☒ general
☐ front
☐ rear
☐ right
☐ left
☒ top
☐ bottom



Details of: Bottom view

View: ☒ general ☐ front ☐ rear ☐ right ☐ left ☐ top ☒ bottom	 The image shows the bottom view of a rectangular metal chassis, likely for a microwave oven. It features a central square ventilation grille, several circular mounting holes, and a complex internal structure. A wooden ruler is placed horizontally below the chassis for scale.
---	--

Details of: Rear view (Location of label)

View: ☒ general ☐ front ☒ rear ☐ right ☐ left ☐ top ☐ bottom	 The image shows the rear view of the same metal chassis. It features a large circular ventilation grille in the center and a black power cord on the left. A red box highlights a location on the top edge, with a red arrow pointing to it from the text 'Rear view (Location of label)'.
---	--

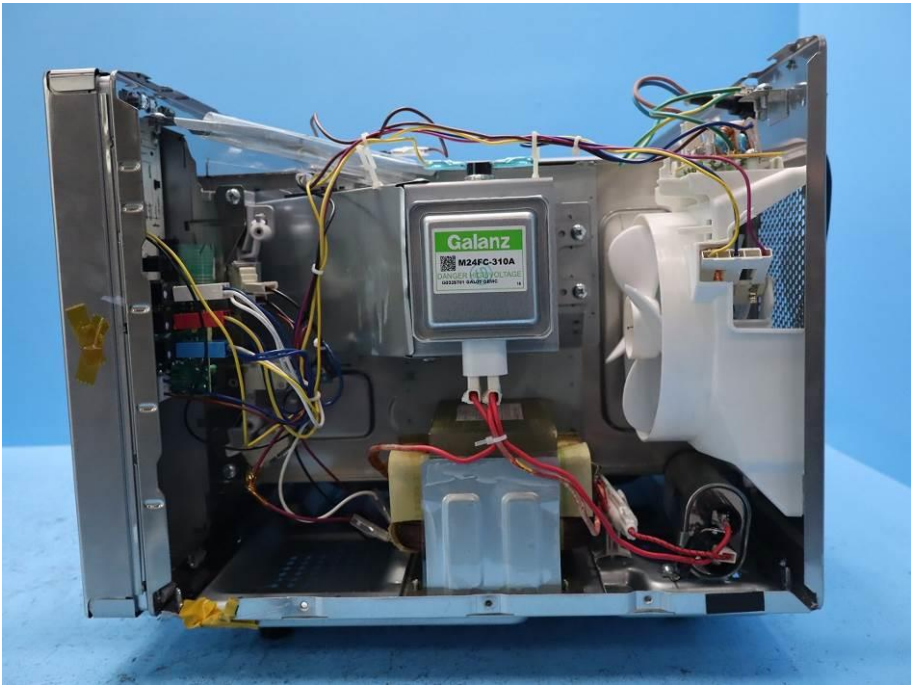
Details of: Cavity

View: ☒ general ☐ front ☐ rear ☐ right ☐ left ☐ top ☐ bottom	
--	---

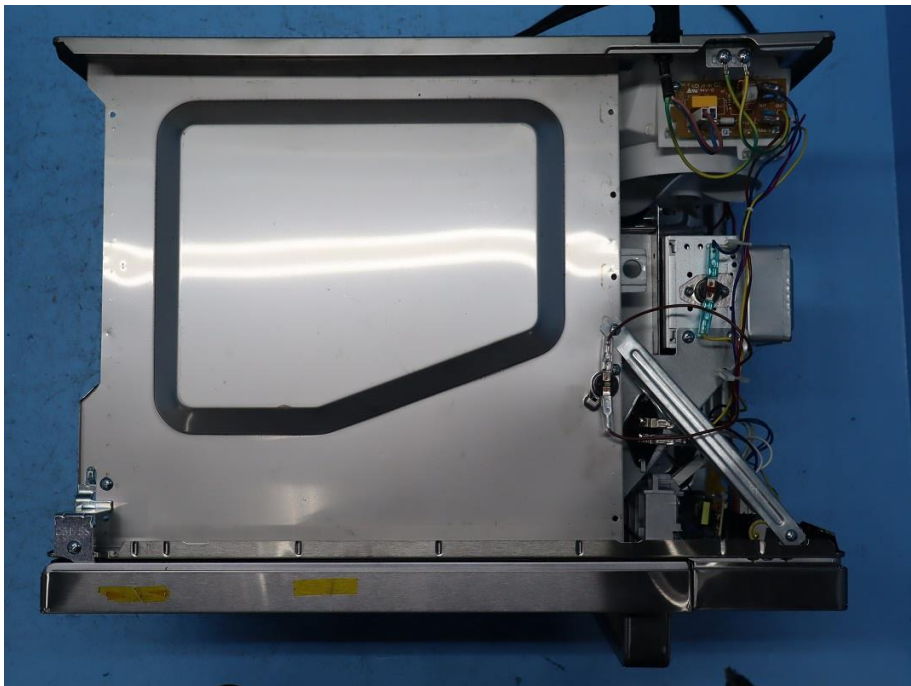
Details of: Control panel

View: ☒ general ☐ front ☐ rear ☐ right ☐ left ☐ top ☐ bottom	
--	--

Details of: Internal wire for right

View: ☒ general ☐ front ☐ rear ☐ right ☐ left ☐ top ☐ bottom	 A photograph showing the internal wiring of a microwave oven from a right-side perspective. The microwave's outer casing is open, revealing a complex arrangement of colorful wires (red, blue, yellow, green, black) connected to various components. A prominent silver-colored metal box in the center is labeled 'Galanz' and 'M24FC-310A'. To the right, a white plastic component, likely part of the turntable assembly, is visible. The entire unit is set against a solid blue background.
--	--

Details of: Internal wire for top

View: ☒ general ☐ front ☐ rear ☐ right ☐ left ☐ top ☐ bottom	 A photograph showing the internal wiring of a microwave oven from a top-down perspective. The microwave's outer casing is open, revealing the internal components. A large, rectangular, silver-colored metal frame is visible on the left side. On the right side, there is a complex arrangement of wires and electronic components, including a circuit board and a transformer. The entire unit is set against a solid blue background.
--	---

Details of: Internal wire for left

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: Earthed terminal and symbol

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Attachment 3

Details of: Magnetron

View: ☒ general ☐ front ☐ rear ☐ right ☐ left ☐ top ☐ bottom	 A close-up photograph of a square metal magnetron component. A white label with a green header 'Galanz' is affixed to the front. Below the brand name is a QR code, the model number 'M24FC-310A', and the text 'DANGER HIGH VOLTAGE' in green. At the bottom of the label, it reads 'G0325701 GAL03 GEMC' and a small number '18'.
--	--

Details of: Turntable motor

View: ☒ general ☐ front ☐ rear ☐ right ☐ left ☐ top ☐ bottom	 A close-up photograph of a circular blue label for a synchronous motor. The label features the 'Galanz' logo at the top, followed by 'SYNCHRONOUS MOTOR' and 'GAL-33-30-TD(B)'. Technical specifications include 'AC 30V 50/60Hz', '33/40r/min 4W Z.P.', and '33FF0 GLZ'. A 'CLASS: E' marking and a circled 'GP' logo are also visible.
--	--

Attachment 3

Details of: View of H.V. capacitor

View:

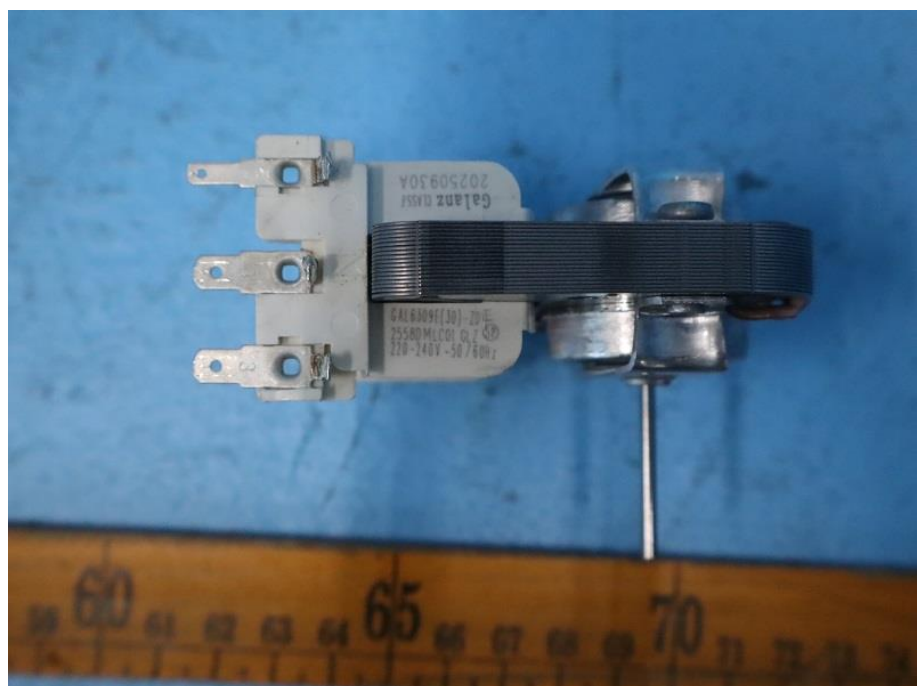
- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Fan motor

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Attachment 3

Details of: Control panel PCB

View:

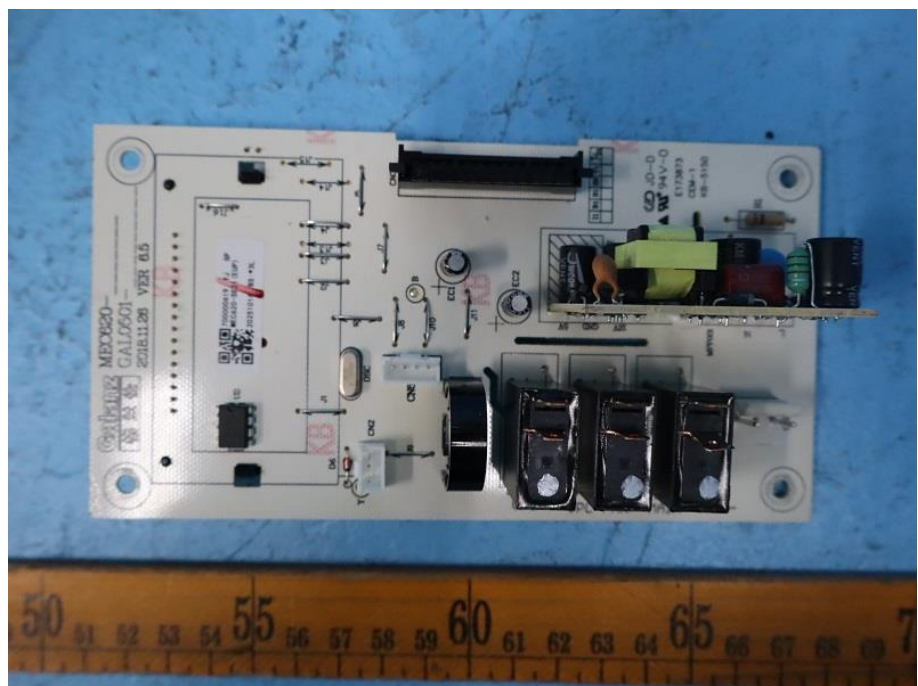
- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Control panel PCB

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

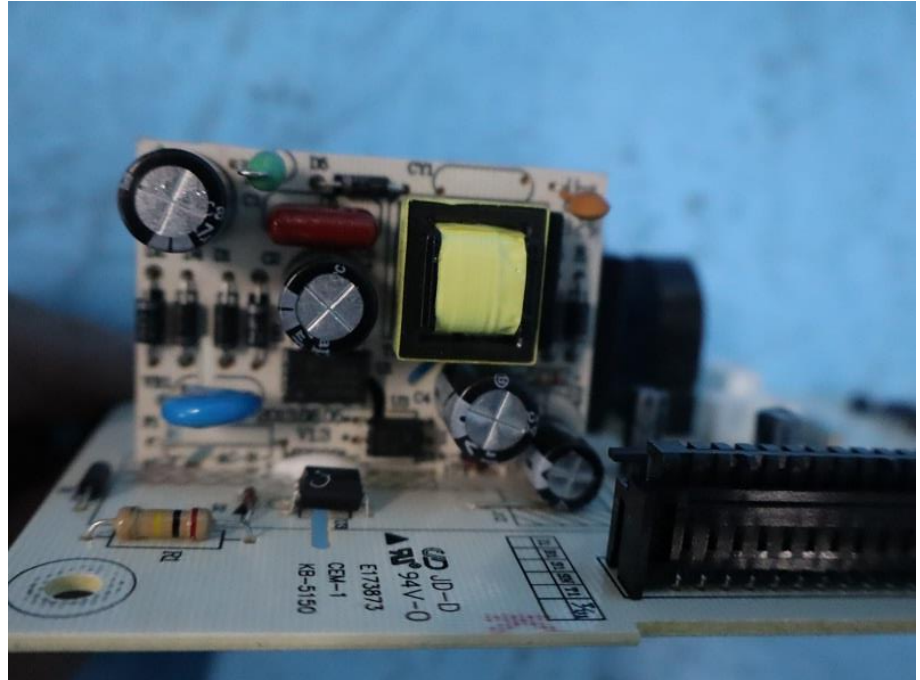


Attachment 3

Details of: Power supply PCB

View:

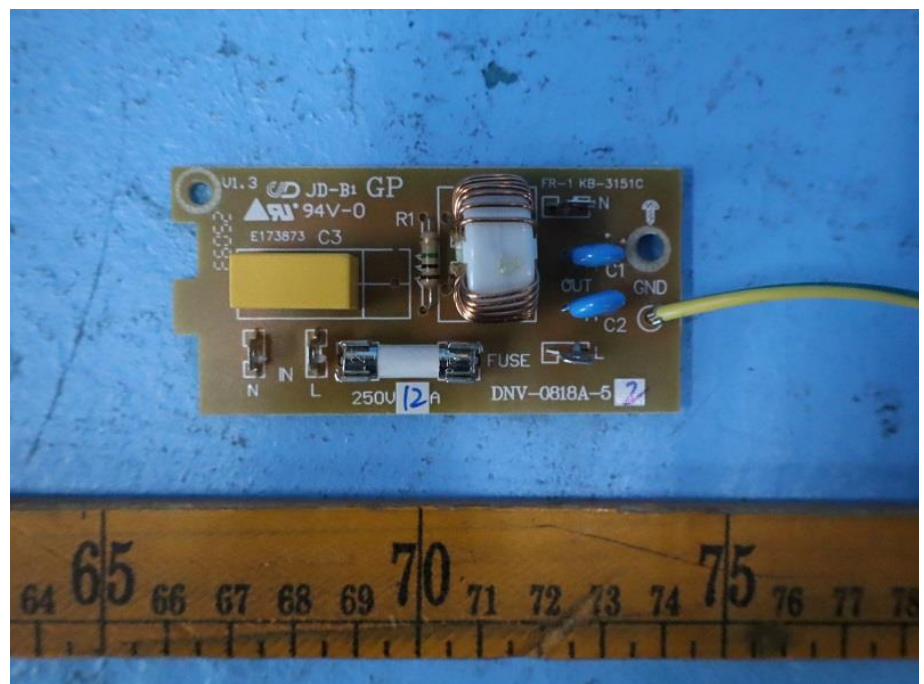
- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



Details of: Noise filter PCB

View:

- ☒ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom

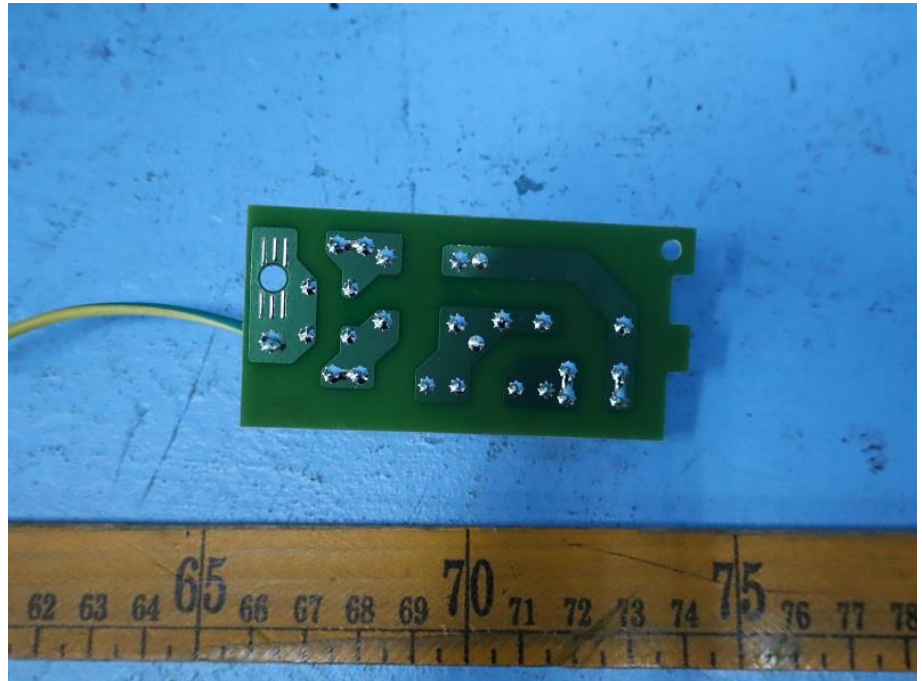


Attachment 3

Details of: Noise filter PCB

View:

- ☒ general
☐ front
☐ rear
☐ right
☐ left
☐ top
☐ bottom



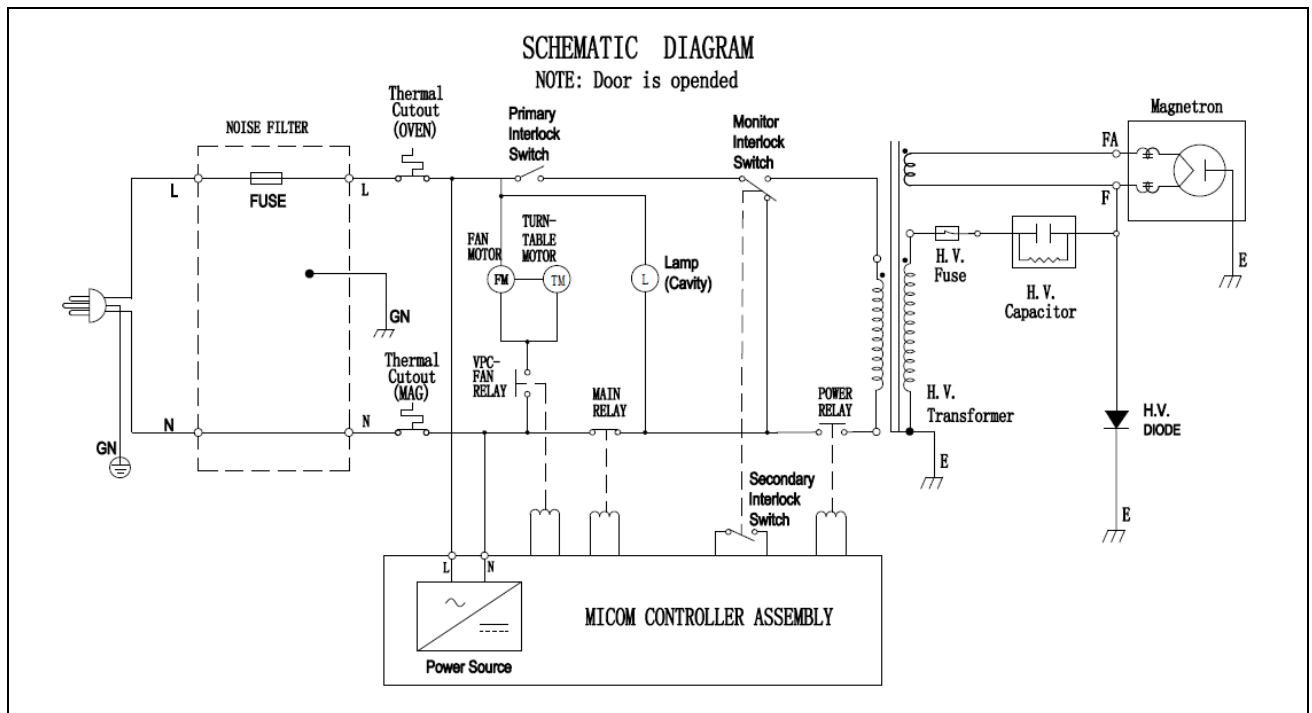
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Attachment 4

Circuit diagram

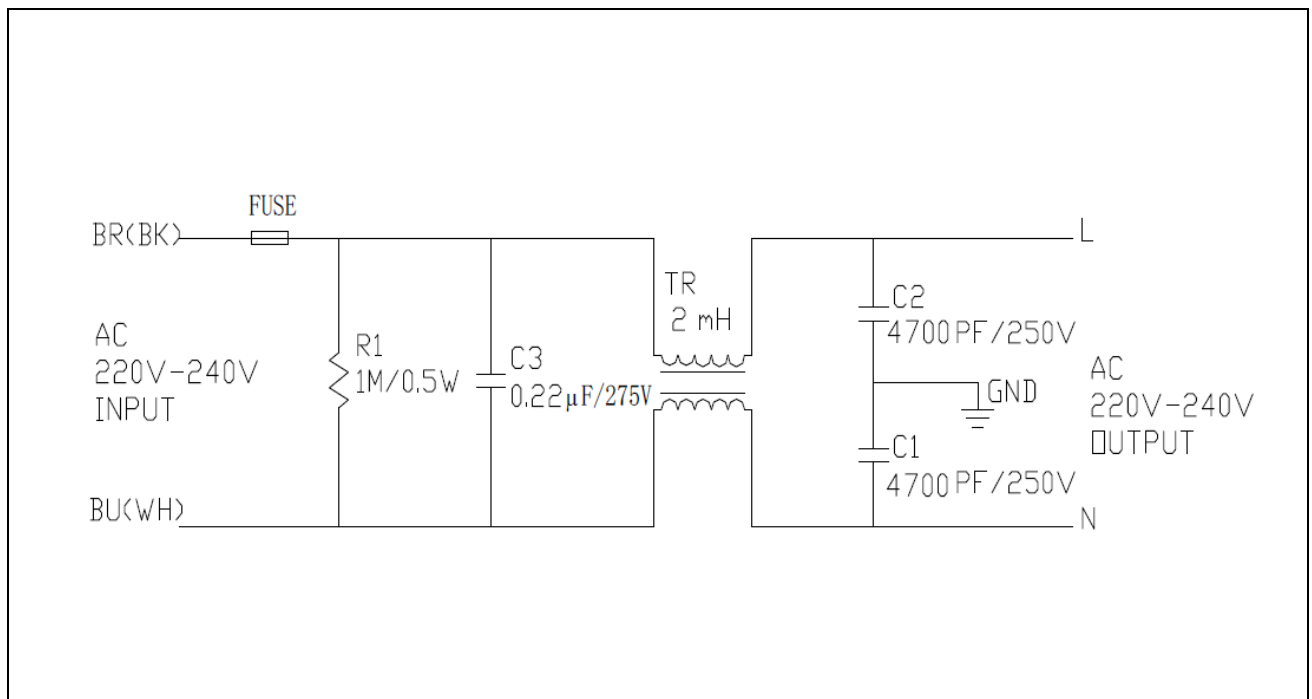
Circuit diagram

P110M25AL-5S, P110M25ASL-5S



Circuit diagram

Noise filter PCB



Attachment 4

Circuit diagram

Control panel PCB

