

Test Report issued under the responsibility of:



TEST REPORT IEC 60335-2-30 Safety of household and similar electrical appliances Part 2: Particular requirements for room heaters	
Report Number :	231100091HAN-001
Date of issue :	2023-12-04 Amendment 1: 2024-07-09
Total number of pages	31 pages report (including 1 page photograph)
Name of Testing Laboratory preparing the Report	Intertek Testing Services Zhejiang Ltd
Applicant's name	Cixi Hengda Electrical Appliance Co.Ltd
Address :	Sanjie, Fuhai Town, Cixi, Zhejiang 315332, P. R. China
Test specification:	
Standard	IEC 60335-2-30:2009, IEC 60335-2-30:2009/COR1:2014, IEC 60335-2-30:2009/AMD1:2016, IEC 60335-2-30:2009/AMD2:2021 for used in conjunction with IEC 60335-1:2010, IEC 60335-1:2010/COR1:2010, IEC 60335-1:2010/COR2:2011, IEC 60335-1:2010/AMD1:2013, IEC 60335-1:2010/AMD1:2013/COR1:2014, IEC 60335-1:2010/AMD2:2016, IEC 60335-1:2010/AMD2:2016, COR1:2016
Test procedure	-
Non-standard test method	EK1 345-07, EK1 185-03
TRF template used :	IECEE OD-2020-F1:2020, Ed.1.3
Test Report Form No.	IEC60335_2_30S
Test Report Form(s) Originator :	VDE Testing and Certification Institute
Master TRF	Dated 2021-06-17
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Test item description :	Convector Heater
Trade Mark(s) :	-
Manufacturer	Same as applicant
Model/Type reference	GCH-10A, GCH-15A, GCH-20A, GCH-25A, GCH-10B, GCH-15B, GCH-20B, GCH-25B, GCH-10C, GCH-15C, GCH-20C, GCH-25C, GCH-10A1, GCH-15A1, GCH-20A1, GCH-25A1, GCH-10B1, GCH-15B1, GCH-20B1, GCH-25B1, GCH-10C1, GCH-15C1, GCH-20C1, GCH-25C1, GCH-10C1F, GCH-15C1F, GCH-20C1F, GCH-25C1F, GCH-10B1F, GCH-15B1F, GCH-20B1F, GCH-25B1F
Ratings :	220-240V~, 50-60Hz, Class I for all models, IP 24 for GCH-10C1F, GCH-15C1F, GCH-20C1F, GCH-25C1F, GCH-10B1F, GCH-15B1F, GCH-20B1F, GCH-25B1F; IP20 for other models. GCH-10A, GCH-10B, GCH-10C, GCH-10A1, GCH-10B1, GCH-10C1, GCH-10C1F, GCH-10B1F: 800-1000W; GCH-15A, GCH-15B, GCH-15C, GCH-15A1, GCH-15B1, GCH-15C1, GCH-15C1F, GCH-15B1F: 1300-1500W; GCH-20A, GCH-20B, GCH-20C, GCH-20A1, GCH-20B1, GCH-20C1, GCH-20C1F, GCH-20B1F: 1800-2000W; GCH-25A, GCH-25B, GCH-25C, GCH-25A1, GCH-25B1, GCH-25C1, GCH-25C1F, GCH-25B1F: 2300-2500W.

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

<input checked="" type="checkbox"/>	Testing Laboratory:	Intertek Testing Services Zhejiang Ltd
	Testing location/ address :	Building 2, Juanhu Science and Technology Innovation Park, No. 500 Shuiyueting East Road, Haining, Zhejiang, China
	Tested by (name, function, signature) :	Luis Liu (Engineer) 
	Approved by (name, function, signature) ...:	Cloud Huang (Reviewer) 

<input type="checkbox"/>	Testing procedure: CTF Stage 1:	N/A
	Testing location/ address :	N/A
	Tested by (name, function, signature) :	N/A
	Approved by (name, function, signature) ...:	N/A

<input type="checkbox"/>	Testing procedure: CTF Stage 2:	N/A
	Testing location/ address :	N/A
	Tested by (name + signature)	N/A
	Witnessed by (name, function, signature) .:	N/A
	Approved by (name, function, signature) ...:	N/A

<input type="checkbox"/>	Testing procedure: CTF Stage 3:	N/A
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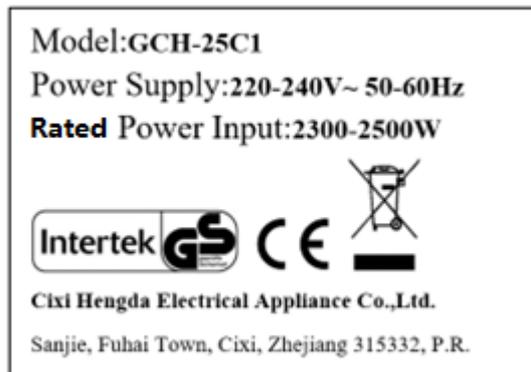
<input type="checkbox"/>	Testing procedure: CTF Stage 4:	N/A
Testing location/ address.....:		N/A
Tested by (name, function, signature).....:		N/A
Witnessed by (name, function, signature) .:		N/A
Approved by (name, function, signature)....:		N/A
Supervised by (name, function, signature) :		N/A

<p>List of Attachments (including a total number of pages in each attachment): Appendix: Photo documents (1 pages)</p>	
<p>Summary of testing: From the result of our inspection and tests on the submitted samples, we conclude that they comply with the requirements of the standards.</p>	
<p>Tests performed (name of test and test clause): Refer to page 6</p>	<p>Testing location: Same as previous page.</p>
<p>Summary of compliance with National Differences (List of countries addressed): Germany. <input checked="" type="checkbox"/> The product fulfils the requirements of <u>EN 60335-2-30:2009 +A11:2012 + A1:2020 + A12:2020+ A2:2022+A13:2022</u> used in conjunction with <u>EN 60335-1:2012 + AC:2014 + A11:2014 +A13:2017 + A1:2019 + A14:2019 + A2:2019 +A15:2021+ A16:2023</u> and <u>EN 62233:2008 + AC:2008</u></p>	
<p>Statement concerning the uncertainty of the measurement systems used for the tests (may be required by the product standard or client)</p> <p><input checked="" type="checkbox"/> 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.</p> <p><input type="checkbox"/> Statement not required by the standard used for type testing</p> <p><small>(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)</small></p>	

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.

(Representative)



(The height of the words shall be at least 15 mm)

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

Test item particulars	
Classification of installation and use: Portable and Fixed, indoor used	
Supply Connection: Type Y	
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....: N/A	
- test object does meet the requirement.....: P (Pass)	
- test object does not meet the requirement.....: F (Fail)	
Testing:	
Date of receipt of test item: 2024-04-24	
Date (s) of performance of tests: 2024-04-24 to 2024-06-25	
General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p> <p>This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.</p> <p>PAH test according to AfPS GS 2019:01 PAK is considered and passed, please refer to PAH test report 231100091HAN-001-PAH and 231100091HAN-001-PAH+A1 for detail.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60335-2-30S:	
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:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	

<p>Name and address of factory (ies)</p>	<p>Cixi Hengda Electrical Appliance Co.Ltd Sanjie, Fuhai Town, Cixi, Zhejiang 315332, P. R. China</p>
<p>General product information and other remarks:</p> <p>The appliances covered in this report are convector heaters, they are wall mounting or portable , which have 6 series (A, B, C,A1, B1,C1 series), for all models thermal cut out and anti-overturn switch served as safeguard, See below description for model similarity:</p> <ol style="list-style-type: none"> 1. A series B series and C series have one voltage maintained non-self-resetting thermal cut-out 2. A1 series, B1 series and C1 series have two self-resetting thermal cut-out except for for GCH-10A1, GCH-10B1 and GCH-10C1 3. GCH-10A1, GCH-10B1 and GCH-10C1 have one self-resetting thermal cut-out 4. A series have a rotary switch and an adjustable thermostat control appliance. 5. B series have touch screen and remote control to control appliance. 6. C series have touch screen , remote control and WIFI module to control appliance. <p>A series are same with A1 series except of heating element, so as to B series, B1 series, C series, C1 series.</p> <ol style="list-style-type: none"> 7. C1F series are similar as C1 series only except C1F are IP24. 8. B1F series are similar as B1 series only except B1F are IP24. 	
<p>Amendment 1:</p> <p>The original test report ref. No. 231100091HAN-001, dated 2023-12-04, was modified on 2024-07-09 to include the following changes and/or additions:</p> <ol style="list-style-type: none"> 1. Updated the standard to “EN 60335-2-30:2009+A11:2012+A1:2020+A12:2020+A2:2022+A13:2022 used in conjunction with EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A2:2019+A14:2019+A15:2021+ A16:2023“ 2. Added new models: GCH-10C1F,GCH-15C1F,GCH-20C1F, GCH-25C1F, GCH-10B1F, GCH-15B1F, GCH-20B1F, GCH-25B1F. and revised the technical data to “IP 24 for GCH-10C1F, GCH-15C1F, GCH-20C1F, GCH-25C1F, GCH-10B1F, GCH-15B1F, GCH-20B1F, GCH-25B1F; IP20 for other models. “ 3. Added plug HX-01 for IP20 models. 4. Revised the type and certification of Self-resetting thermal cut out: from “KSD101” to “KSD302”. <p>After review, relevant tests should be conducted.</p> <p>Clause connected: CI7, 15,16,22, ANNEX IEC 60335-2-30:2009/A2:2021, EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES of EN 60335-2-30: A2:2022+A13:2022 and ANNEX EN 60335-1: A16:2023.</p> <p>Table connected: Table 16, 24.1.</p>	

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V)	220-240V	P
	Symbol for nature of supply, or	~	P
	Rated frequency (Hz)	50-60Hz	P
	Rated power input (W), or	Refer to page 2	P
	Rated current (A)		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark	Refer to page 2	P
	Model or type reference	Refer to page 2	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0.....	Refer to page 2	P
	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
	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
	Heaters intended to be filled with liquid by the user shall be marked with max. and min. levels (IEC 60335-2-30)		N/A
	Heaters shall be marked: WARNING "Do not cover" - or with the symbol 5641 of IEC 60417-1 with or without colours (IEC 60335-2-30)	symbol	P
	This Marking is not required for- (IEC 60335-2-30)		
	- Heaters for mounting high level; (IEC 60335-2-30)		N/A
	- visible glowing radiant heaters (IEC 60335-2-30)		N/A
	- heaters constructed so that they cannot be covered: (IEC 60335-2-30)		N/A
	- heaters also intended to dry clothes and witch comply with IEC 60335-2-43 (IEC 60335-2-30)		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict
	-heaters for mounting under benches (IEC 60335-2-30)		N/A
	Heaters having a fireguard that is intended to be removed for transportation or storage shall be marked to state that the heater must not be operated without this guard in place (IEC 60335-2-30)		N/A
	For ceiling mounting heat lamp appliances, the maximum rated wattage and type of each lamp shall be marked (IEC 60335-2-30)		N/A
	Cab heaters shall be marked with the following: (IEC 60335-2-30) Cab heater		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		
8.1	Adequate protection against accidental contact with live parts		P
	This requirement does not apply to live parts of screw-type or bayonet-type lampholders incorporated in ceiling mounted heat lamp appliances that are only accessible when the heat lamp is extracted (IEC 60335-2-30)		N/A
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
	Detachable fireguards not removed if their removal requires the use of a tool, provided that (IEC 60335-2-30)		
	- the instructions state that the plug must be removed from the socket-outlet before cleaning the reflector, or		N/A
	- the heater incorporates a switch having contact separation all poles that provides full disconnection under overvoltage category III conditions		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict
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
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		
	- built-in appliances		N/A
	- fixed appliances		P
	- appliances delivered in separate units		P
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
	During user maintenance and after the removal of detachable parts during replacement of heat lamp, the basic insulation of internal wiring may be touched provided electrically equivalent to the insulation of cords complying with IEC 60227 or IEC 60245 (IEC 60335-2-30)		N/A
15	MOISTURE RESISTANCE		
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance	IP24	P
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		P
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		P
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529	IP24	p
	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

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		P
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		P
	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		P
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		P
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		P
	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
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)	254,4V	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

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict
	Limit values doubled if:		
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified	(see appended table)	N/A
16.3	Electric strength tests according to table 7	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified	(see appended table)	P
	No breakdown during the tests		P
22	CONSTRUCTION		
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IP24	P

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 60335-2-30:2009, AMD1:2016, AMD2: 2021. IEC 60335-1:2010, AMD1:2013, AMD2:2016 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY – PART 2-30: Particular requirements for room heaters			
Differences according to	EN 60335-2-30:2009 +A11:2012 + A1:2020 + A12:2020 + A2:2022 + A13:2022 used in conjunction with EN 60335-1:2012 + AC:2014 + A11:2014 +A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 EN 62233:2008		
TRF template used.....	IECEE OD-2020-F2:2022, Ed. 1.2		
Attachment Form No.	EU_GD_IEC60335_2_30S_II		
Attachment Originator.....	LCIE		
Master Attachment	Dated 2023-02-24		
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CENELEC COMMON MODIFICATIONS (EN)			
6.1	Delete “class 0” and “class 01”		--
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
	The instructions shall include the substance of the following: (EN 60335-2-30)		--

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
	Children of less than 3 years should be kept away unless continuously supervised.		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
	Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance		P
	CAUTION — Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.		P
7.12.Z1	The specific instructions related to the safe operation of this appliance (as given in 7.12 of this standard) shall be collated together in the front section of the user instructions. The height of the characters, measured on the capital letters, shall be at least 3 mm. These instructions shall also be available in an alternative format, e.g. on a website		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
	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

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
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 applying the test probes of EN 61032		P
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A
11.8	The temperature rise of surfaces of heaters shall not exceed the values shown in Table 101 (EN 60335-2-30)	(see attached table)	P
11.Z101	For the measurement of temperature rises the instructions from the manufacturer on where the appliance has to be situated during normal operations have to be followed..... (EN 60335-2-30)		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	Parts that are intended to be removed only for user maintenance are not removed..... (EN 60335-2-30)		N/A
	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		N/A
	When using the test probe similar to test probe B with a circular stop face, the accessories and detachable covers are removed		P
	Test probe 18 applied with a force of 2,5N on the appliance fully assembled		P
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

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
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
	- 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, 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 are 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.Z101	Stationary appliances part or all of the body of which are positioned at a height below 850 mm from the floor and portable appliances that can be used on the floor shall not have accessible openings with a minor dimension exceeding 5,5mm. (EN 60335-2-30)	Not exceeding 5,5mm	P
24.1	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

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
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
	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
	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 previously 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		P
	- unless the pre-selection alternatives in 30.2 are used, the test report for the component states the values of t_e and t_i acc. to EN 60695-2-11		P
	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		P

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
	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 separately 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 previously tested and found to comply with the relevant standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance		N/A
	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		N/A
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1,		N/A
	if 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
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with Clause 8 of this standard is not impaired by connecting the appliance to a device covered by EN 41003		N/A
24.Z1	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,		N/A
	unless they are held in place near the terminals independently of the solder		N/A
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N/A
32	Compliance regarding electromagnetic fields is checked according to EN 62233		P
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		N/A
C	ANNEX C (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		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
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
	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		N/A
	> 13 and ≤ 16 1,5 (1,0) ^b		N/A
ZB	ANNEX ZB (INFORMATIVE) A-DEVIATIONS		
	Ireland		
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		N/A
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A
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		N/A
	Model or type reference		N/A
	Serial number, if any		N/A
	Production year		N/A
	Designation of the appliance		N/A
7.12	Instructions provided with the appliance so that the appliance can be used safely		N/A
	The instructions contain at least the following information:		N/A
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		N/A
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		N/A
	- 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		N/A
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		N/A
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		N/A
	The words "Original instructions" appear on the language version(s) verified by the manufacturer or by the authorized representative		N/A
	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		N/A
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures		N/A
7.12.ZE1	If needed for specific appliances, the following information to be given:		--
	- 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		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
	- 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		N/A
	- 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		N/A
	- 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		N/A
	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		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

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		N/A
20.2	Dangerous moving transmission parts safeguarded either by design or guards		N/A
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		N/A
	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		N/A
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
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N/A
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
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
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
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
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		N/A
	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		
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive)	LVD	P

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
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
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:		N/A
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4	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		
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT to TRF IEC60335_2_30S			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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

ATTACHMENT TO TEST REPORT	
IEC 60335-1	
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES	
HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES	
Differences according to	EN 60335-1:2012/A16:2023
Attachment Form No.	TTRF_EUA16_GD_IEC60335_1X
Attachment Originator	Intertek
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GENELEC COMMON MODIFICATIONS (EN)	
EN 60335-1:2012/A16:2023	

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict
22.44	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:		N/A
	- No surface (both functional surfaces and non-functional) that are accessible by means of test probe 19 of IEC 61032 located at a height less than 850 mm shall exceed the temperature rises stated below:		N/A
	– of bare metal 38K		N/A
	– of coated metal 42K		N/A
	– of glass and ceramic 51K		N/A
	– of plastic having a thickness exceeding 0,4 mm 58K		N/A
	- Hazardous moving parts shall not be accessible by means of test probe 19 of IEC 61032 under the conditions specified for test probe 18 in Clause 20.2.		N/A
	- Live parts shall not be accessible by means of test probe 19 of IEC 61032 under the conditions specified for test probe 18 in Clause 8.1.1.		N/A
	- Liquid in the appliance shall not exceed 38 °C in normal use when it is accessible by means of test probe 19 under the conditions specified for test probe 18 in Clause 20.2 or can get out of the appliance when positioned in different positions. Vessels in which two independent and sequential actions are needed to access the liquid are considered to meet the requirement.		N/A
	- The requirement of 22.12 is applicable for all accessible parts of the appliance.		N/A
	The requirement is not applicable to appliances where there is a toy shaped like the appliance.		N/A
	NOTE Z1 An example of a toy shaped like an appliance is a toy refrigerator.		N/A
	Compliance is checked by inspection and appropriate tests.		N/A
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE		
22.ZE.5	The fixing systems of fixed guards which prevent access to hazardous moving transmission parts shall only be removable with the use of tools.		N/A

IEC 60335-2-30			
Clause	Requirement + Test	Result - Remark	Verdict
22.ZE.10	Noise reduction is an integral part of the design process and shall be achieved by particularly applying measures at source to control noise, see for example EN ISO 11688-1:2009. 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

16.2	TABLE: Leakage current		P
	Single phase appliances: 1.06 x rated voltage.....:	254,4V	—
	Three phase appliances 1.06 x rated voltage divided by $\sqrt{3}$:.....:	N/A	—
Leakage current between		I (mA)	Max. allowed I (mA)
Live part and the accessible metal enclosure:		Max. 0,04	0,75
Live part and the accessible non-metallic control panel:		Max. 0,02	0,25

16.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
L/N and earthed metal enclosure		1250	No
Inner surface and outer surface of non-metallic control panel		1750	No
L/N and non-metallic control panel, knob surface		3000	No

24.1	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Please refer to the latest edition of the Constructional Data Form (CDF) issued for this test report.						

Appendix – Photographs

Photo 1.

Description: Internal view of C1F and B1F for represent



Photo 2.

Description: Internal view of C1F and B1F for represent

