





Test Report issued under the responsibility of:

SGS Fimko Ltd.

TEST REPORT IEC 60335-2-24 Safety of household and similar electrical appliances Part 2: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers	
Report Number.	GZES180300345302A1
Date of issue	2018-05-28, Amendment 1: 2019-06-04
Total number of pages	142
Name of Testing Laboratory preparing the Report	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch Building 1, European Industrial Park, No.1, Shunhenan Road, Wusha, Daliang, Shunde District, Foshan, Guangdong, China
Applicant's name	Hisense Ronshen (Guangdong) Refrigerator Co., Ltd.
Address	8 Ronggang Road, Ronggui, Shunde, Foshan, Guangdong, China
Test specification:	
Standard	IEC 60335-2-24:2010, AMD1:2012 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2010, AMD1:2013, COR1:2014, AMD2:2016, COR1:2016
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC60335_2_24Q
Test Report Form(s) Originator	Electrosuisse
Master TRF	Dated 2017-08
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Test item description	Frost Free Refrigerator Freezer (Refrigerator Freezer)	
Trade Mark	—	
Manufacturer	Same as applicant	
Model/Type reference	RF702N4IS1, RT-70WC4S1, RF715N4AS1, RT-72WC4S1	
Ratings	220 V - 240 V; 50 Hz; 0,9 A; Defrost power 340 W	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	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)		Ray Huang / Project Engineer 
Approved by (name, function, signature) ...		Mike Liu / Reviewer 
Testing procedure: CTF Stage 1:		
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) ...		
Testing procedure: CTF Stage 2:		
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name, function, signature) ..		
Approved by (name, function, signature) ...		
Testing procedure: CTF Stage 3:		
Testing procedure: CTF Stage 4:		
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: 23 pages of Photo documentation;
 Attachment 2: 2 pages of Circuit diagram;
 Attachment 3: 9 pages of EU group differences;
 Attachment 4: 7 pages of IEC 60335-2-24:2010 / A2: 2017

Summary of testing:**Tests performed (name of test and test clause):**

Tests according to the following standards were carried out:
 IEC 60335-2-24: 2010 + A1: 2012 + A2: 2017
 IEC 60335-1: 2010 + A1: 2013 + A2: 2016
 EN 60335-2-24: 2010 + A1: 2019 + A2: 2019
 EN 60335-1: 2012 + A11: 2014 + A13: 2017
 EN 62233: 2008

Testing location:

See page 3

After reviewing, tests were arranged as following:

After following, tests were changed as following:

Model no.	Components		Test items
RF702N4IS1	Compressor	NX1119Y	Full tests
	Defrost heater (refrigerated storage)	Anze	
	Defrost heater (freezing storage)	Anze	
	Pillar heater	Anze	
	Water pipe heater	Anze	
	Fan motor (F)	Powerful	
	Fan motor (R)	NIDEC	
RF702N4IS1	Compressor	NX1119Y	Clause 10, 11, 13, 15, 16, 19, 22, 24, 29, 30, Annex AA
	Defrost heater (refrigerated storage)	Jian Long	
	Defrost heater (freezing storage)	Anze	
	Pillar heater	Jian Long	
	Water pipe heater	Jian Long	
	Fan motor (F)	Taixin	
	Fan motor (R)	NIDEC	
RF715N4AS1	Different main control unit		Clause 10, 11, 13, 17, 22, 29, 30
Amendment 1			
RF702N4IS1	Updated standard		Clause 15, 16, 21, 30.2.101, user manual and construction checking

LED lamps were fulfilled with EN 62471: 2008.







The submitted appliances complied with the above standards.

Summary of compliance with National Differences (List of countries addressed):

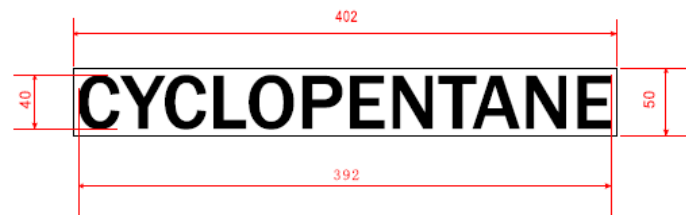
Including EU group differences and national differences for Germany.
 Requirements in German legislation ProdSG and EK decisions for electrical equipment have been taken into account. Risk analysis and evaluation for PAH has been performed (ref. AfPS GS 2014:01 PAK, EK 1 601-15).

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.

FROST FREE REFRIGERATOR FREEZER		Kühlschrank mit Gefrierfach	
Hisense		Hisense	
MODEL RT-70WC4S1		Modell Nummer: RT-70WC4S1	
CLIMATIC CATEGORY	SN,N,ST,T	Klimaklasse:	SN,N,ST,T
PROTECTIVE CLASSIFICATION OF ELECTRIC SHOCK RESISTANCE	I	Schutzklasse:	I
RATED VOLTAGE	220-240V~	Spannung:	220-240V~
RATED FREQUENCY	50Hz	Bemessungsfrequenz:	50Hz
RATED CURRENT	0.9A	Bemessungsstrom:	0.9A
DEFROST POWER	340W	Abtauleistung	340W
MAX WATTAGE OF LAMP	3W+1W	Leistungsaufnahme der Lampe	3W+1W
REFRIGERANT	R600a(75g)	Kältemittel:	R600a(75g)
INSULATION BLOWING GAS	CYCLOPENTANE	Schaummittel:	CYCLOPENTANE
  		  	
Hisense Ronshen (Guangdong) Refrigerator Co., Ltd.		Hisense Ronshen (Guangdong) Refrigerator Co., Ltd.	

Rating labels of other models are same as above except model no.



The marking of insulation blowing gas for all models. Letter height: 40 mm.



The marking of risk of fire for all models. Letter height: 15 mm.

- 1) The Height of CE logo shall not be less than 5 mm; Height of WEEE logo shall not be less than 7 mm;
- 2) 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.
- 3) 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.

Test item particulars.....:	
Classification of installation and use	Stationary appliance
Supply Connection	Non-detachable cord fixed with 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.....	2018-03-26, 2019-03-20
Date (s) of performance of tests	2018-03-26 to 2018-05-28 2019-03-20 to 2019-03-28
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. This document is issued by the Company subject to its General Conditions of Service, 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.</p> <p>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.</p> <p>Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 3 months only.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IECCE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... : Same as manufacturer	

General product information:

Compression-type refrigerator freezers for household use and indoor use. The refrigerant is R600a.

Climatic class: SN, N, ST, T;

Main differences among all models listed as following:

Model no.		Compressor / refrigerant	Defrost heater (refrigerated storage)	Defrost heater (freezing storage)	Pillar heater	Water pipe heater	Fan motors (compartment R)	Fan motors (compartment F)	Water dispenser
Series 1	RT-70WC4S1	NX1119Y (75 g)	Anze / Jian Long (100 W)	Anze (240 W)	Anze / Jian Long	Anze / Jian Long	NIDECE	Powerful / Taixin	With
	RF702N4IS1					—			—
Series 2	RT-72WC4S1					—			—
	RF715N4AS1					—			—

Remark:

a) RF702N4IS1 is same as RT-70WC4S1 except model no.;

b) RF715N4AS1 is same as RT-72WC4S1 except model no.;

c) RF702N4IS1 and RF715N4AS1 are assembled with different power PCB / main control unit;

However, two main control PCB units have the similar components and layout but different circuit diagram;

More details can be referred to Attachment 1 and 2.

Amendment 1:

The original Test Report Ref. No. GZES180300345301, dated 2018-05-28 was modified on 2019-06-04 to include the following changes and/or additions:

1, Standards updated;

EN 60335-2-24: 2010 was updated to EN 60335-2-24: 2010 + A1: 2019 + A2: 2019.

IEC 60335-2-24: 2010 + A1: 2012 was updated to IEC 60335-2-24: 2010 + A1: 2012 + A2: 2017


2, Added Non-metallic material for external rear surface for alternative. (Detail see table 24.1)

After reviewing, tests of clause 15, 16, 21, 30.2.101, user manual and construction checking were conducted on model RF702N4IS1.

IEC 60335-2-24			
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	Before starting the tests (IEC 60335-2-24:2010):		—
	- ice cream appliances are operated empty at rated voltage as specified		N/A
	- other compression-type appliances shall be operated at rated voltage for 24 h then switched off for 12 h		P
5.7	Tests according to Clauses 10, 11, 13 and subcl. 19.103 at ambient temperature of: (IEC 60335-2-24:2010)		—
	(23 + 2) °C for ice-cream appliances		N/A
	(32 + 1) °C Climatic class	SN <input checked="" type="checkbox"/>	P
	(32 + 1) °C Climatic class	N <input checked="" type="checkbox"/>	P
	(38 + 1) °C Climatic class	ST <input checked="" type="checkbox"/>	P
	(43 + 1) °C Climatic class	T <input checked="" type="checkbox"/>	P
5.102	Compression-type appliances with heating systems and Peltier-type appliances are tested as combined appliances (IEC 60335-2-24:2010)		P
6	CLASSIFICATION		—
6.1	Protection against electric shock: Class 0, 0I, I, II, III	Class I	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	P
6.101	Appliances, other than ice-cream appliances, shall be of one or more of the following climatic classes: SN, N, ST, T (IEC 60335-2-24:2010)		P
7	MARKING AND INSTRUCTIONS		—
7.1	Rated voltage or voltage range (V)	220 V – 240 V	P
	Symbol for nature of supply, or		N/A
	Rated frequency (Hz)	50 Hz	P
	Rated power input (W), or		N/A
	Rated current (A)	0,9 A	P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	Manufacturer's or responsible vendor's name, trademark or identification mark	Hisense Ronshen (Guangdong) Refrigerator Co., Ltd.	P
	Model or type reference	RF702N4IS1, RT-70WC4S1, RF715N4AS1, RT-72WC4S1	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0.....	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
	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
	Power input of heating systems, if greater than 100 W, (W) (IEC 60335-2-24:2010)		N/A
	Defrosting input, in W, if greater than the rated power input, (W) (IEC 60335-2-24:2010)	340 W	P
	Rated power input in Watts (IEC 60335-2-24:2010)		N/A
	Rated current in Amperes for compression-type appliances (IEC 60335-2-24:2010)	Detail see page 2	P
	Climatic class of the appliance (SN, N, ST or T) (IEC 60335-2-24:2010)	SN, N, ST, T	P
	Maximum rated input of lamps in Watts (IEC 60335-2-24:2010)		N/A
	Not applicable if the lamps can only be replaced by the manufacturer (IEC 60335-2-24:2010)	Non-replaceable LED lamp	N/A
	Total mass of the refrigerant (IEC 60335-2-24:2010)	See rating label	P
	For a single component refrigerant, at least one of the following (IEC 60335-2-24:2010):		—
	- the chemical name		N/A
	- the chemical formula		N/A
	- the refrigerant number	R600a	P
	For a blended refrigerant, at least one of the following (IEC 60335-2-24:2010):		—

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	- the chemical name and nominal proportion of each of the components		N/A
	- the chemical formula and nominal proportion for each of the components		N/A
	- the refrigerant numbers and nominal proportion of each of the components		N/A
	- the refrigerant number of the refrigerant blend		N/A
	The chemical name or refrigerant number of the insulation blowing gas (IEC 60335-2-24:2010)	CYCLOPENTANE	P
	Battery voltage for appliances which can be mains and battery operated (IEC 60335-2-24:2010)		N/A
	Max. power input for incorporated ice-maker, if greater than 100 W (IEC 60335-2-24:2010)		N/A
	Ice-makers shall be marked with the maximum permissible water level (IEC 60335-2-24:2010)		N/A
	Compression-type refrigerating systems appliance shall be marked with mass of the refrigerant for each separate refrigerant circuit (IEC 60335-2-24:2010)		N/A
	Compression-type appliances flammable which use refrigerants shall be marked the symbol "Caution: risk of fire" (IEC 60335-2-24:2010)		P
	Appliances employing R-744 in a transcritical refrigeration system shall be marked with the substance of the following: (IEC 60335-2-24:2010)		—
	Warning: System contains refrigerant under high pressure. Do not tamper with the system. It must be serviced by qualified persons only.		N/A
	Appliances employing R-744 in a transcritical refrigeration system shall be marked with symbol ISO 7000 – 1701 (2004-01). (IEC 60335-2-24:2010)		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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	Requirement met if frequent changes are not required and the rated voltage or rated frequency to which the appliance is to be adjusted is determined from a wiring diagram		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A
	the power input 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
	 Symbol IEC 60417-5005 (2002-10) Plus; positive polarity (IEC 60335-2-24:2010)		N/A
	 Symbol IEC 60417-5006 (2002-10) Minus; negative polarity (IEC 60335-2-24:2010)		N/A
	 Symbol ISO 7010 W021 Caution: risk of fire (IEC 60335-2-24:2010)		P
	 Symbol ISO 7000-1701 (2004-01) Pressure (IEC 60335-2-24:2010)		N/A
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N/A
	correct mode of connection is obvious		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		—
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking of functional earthing terminals (symbol IEC 60417-5018)		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	- marking not placed on removable parts		P
7.9	Marking or placing of switches which may cause a hazard		N/A
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means	By figures, letters and other visual means	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
	See Note (IEC 60335-2-24:2010)		P
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
	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 for refrigerating appliances and ice-makers for camping or similar use include the substance of the following (IEC 60335-2-24:2010):		—
	- suitable for camping use		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	- the appliances connected to more than one source of energy		N/A
	- the appliances shall not be exposed to rain unless at least IPX4		N/A
	- for ice-makers not intended to be connected to the water supply WARNING: fill with potable water only		N/A
	For compression-type appliances which use flammable refrigerants, instructions shall include information pertaining to the installation, handling, servicing (IEC 60335-2-24:2010)		N/A
	For compression-type appliances that use flammable refrigerants shall additionally include the substance of the warnings listed below: (IEC 60335-2-24:2010)		P
	- WARNING – Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction (IEC 60335-2-24:2010)		P
	- WARNING – Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer (IEC 60335-2-24:2010)		P
	- WARNING – Do not damage the refrigerant circuit (IEC 60335-2-24:2010)		P
	- WARNING – Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer (IEC 60335-2-24:2010)		P
	Appliances which use flammable insulation blowing gases, instructions shall include information regarding disposal of the appliance (IEC 60335-2-24:2010)		P
	Instructions for ice-cream appliances shall include ingredients and max. quantity of mixtures that can be used in the appliance (IEC 60335-2-24:2010)		P
	The instructions shall state the substance of the following (IEC 60335-2-24:2010)		—
	Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.		P
	If symbol ISO 7000–1701 (2004-01) is used, its meaning shall be explained.		N/A
	The instructions shall include the substance of the following (IEC 60335-2-24:2010)		—

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	This appliance is intended to be used in household and similar applications (list)		P
7.12.1	Sufficient details for installation supplied		P
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		P
	If different rated voltages or different rated frequencies are marked, the instructions state what action to be taken to adjust the appliance		N/A
	The method for replacing illuminating lamps included (IEC 60335-2-24:2010), if the lamps can be replaced by the user (A1:12)		N/A
	Appliances designed for incorporating ice-makers, the types of ice-makers (IEC 60335-2-24:2010)		N/A
	Information on the installation of incorporated ice-makers as optional accessories (IEC 60335-2-24:2010)		N/A
	Incorporated ice-makers installed only by the manufacturer or its service agent (IEC 60335-2-24:2010)		N/A
	Ice makers intended to be connected to the water supply (IEC 60335-2-24:2010):		—
	WARNING: connect to potable water supply only (IEC 60335-2-24:2010)		N/A
	Instructions for fixed appliances shall include the following warning (IEC 60335-2-24:2010):		—
	WARNING: To avoid a hazard due to instability of the appliance, it must be fixed in accordance with the instructions (IEC 60335-2-24:2010)		N/A
	In appliances employing R-744 in a transcritical refrigeration system the instructions shall include the substance of the following (IEC 60335-2-24:2010) :		—
	WARNING: The refrigeration system is under high pressure. Do not tamper with it. Contact qualified service personal before disposal.		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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
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
	a switch complying with 24.3		N/A
	Also applicable to fixed appliances (IEC 60335-2-24:2010)		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).....:		P
	- 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		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	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 :		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..... :		N/A
	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		N/A
	contrasting colours are used		N/A
	Markings checked by inspection, measurement and rubbing test as specified		P
	The height of the triangle in the symbol "Caution: risk of fire" shall be at least 15 mm (IEC 60335-2-24:2010)		P
	The height of the letters used for the marking of the type of flammable blowing insulation gas shall be at least 40 mm (IEC 60335-2-24:2010)		P
7.15	Markings on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		P
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. rated input of lamps discernible that can be replaced by the user (IEC 60335-2-24:2010)	Non-replaceable LED lamp	N/A
	Compression-type appliances the marking of the type of flammable refrigerant and of the flammable insulation blowing gas, as well as the symbol Caution: risk of fire, shall be visible when gaining access to the motor-compressors (IEC 60335-2-24:2010)		P
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N/A
7.101	Appliances which can be battery operated the connection shall be indicated by the symbol "+" or the colour red and "-" or black (IEC 60335-2-24:2010)		N/A
	The positive terminal shall be indicated by symbol IEC 60417-5005 (2002-10) and the negative terminal by symbol IEC 60417-5006 (2002-10). (IEC 60335-2-24:2010)		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		—
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
	Removal of lamps: protection against contact with live parts (IEC 60335-2-24:2010)		N/A
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		P

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	- safety extra-low d.c. voltage: not exceeding 42.4 V	Max. 5,4 V	P
	- or separated from live parts by protective impedance		N/A
	If protective impedance: d.c. current not exceeding 2 mA, and	Max. 0,14 mA	P
	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 μF		P
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC		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		—
	Not applicable (IEC 60335-2-24:2010)		—

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Clause	Requirement + Test	Result - Remark	Verdict

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		N/A
	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		N/A
	Appliances being operated under normal operation, user adjustable temperature controls are set to give the lowest temperature (IEC 60335-2-24:2010)		N/A
	The power input stabilized, steady conditions established (IEC 60335-2-24:2010)		N/A
	A period between the making and the breaking of the temperature control, or highest and lowest values of power input measured excluding starting power input but including the power input of the incorporated ice-maker, if any (IEC 60335-2-24:2010)		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2 :	(see appended table)	P
	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period		N/A
	Otherwise the current is the arithmetic mean value		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	the rated current is related to the arithmetic mean value of the range		P
	The appliance being operated under normal operation, user adjustable temperature controls are set to give the lowest temperature (IEC 60335-2-24:2010)		P
	The appliance is operated for 1 h. The max. value of the current averaged over any 5 min period is obtained. The interval shall not exceed 30 s. Starting after 1 min (IEC 60335-2-24:2010)		P
10.101	The power input of the defrosting system, deviation shown in Table 1 (IEC 60335-2-24:2010)		P
10.102	The power input of any heating system, deviation shown in Table 1 (IEC 60335-2-24:2010)		N/A
11	HEATING		—
11.1	No excessive temperatures in normal use		P
	If the winding temperatures of motor-compressors exceed the values given in Table 101, compliance is checked by the test of 11.101 (IEC 60335-2-24:2010)		N/A
	The winding temperatures of motor-compressors conforming IEC 60335-2-34 (incl. Annex AA) are not measured (IEC 60335-2-24:2010)		P
11.2	Placing and mounting of appliance as described (IEC 60335-2-24:2010)		P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless	Valve	P
	the windings are non-uniform or it is difficult to make the necessary connections	Fan motor, transformer	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)		N/A
11.6	Combined 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
11.7	Operation duration corresponding to the most unfavourable conditions of normal use		P

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Clause	Requirement + Test	Result - Remark	Verdict
	The appliances is operated until steady conditions are established (IEC 60335-2-24:2010)		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
	Sealing compound does not flow out		N/A
	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
	During the test protective devices do not operate (IEC 60335-2-24:2010)		P
	During the test sealing compound doesn't flow out (IEC 60335-2-24:2010)		N/A
	During the test temperatures are monitored continuously (IEC 60335-2-24:2010)		P
	For (SN) and (N) class, the temperature rises not exceeding values in Table 3 (IEC 60335-2-24:2010)		P
	For (ST) and (T) class, the temperature rises not exceeding values in Table 3 reduced by 7 K (IEC 60335-2-24:2010)		P
	For motor-compressors not conforming to IEC 60335-2-34 (incl. its Annex AA), the temperatures of (IEC 60335-2-24:2010)		—
	- housings of motor-compressors and		N/A
	- windings of motor-compressors		N/A
	shall not exceed the values given in Table 101		N/A
	For motor-compressors conforming to IEC 60335-2-34 (including its Annex AA), the temperatures are not measured (IEC 60335-2-24:2010)		P
	The temperature rise of the external enclosure of motor-operated appliances not applicable for: (IEC 60335-2-24:2010)		—
	-built-in appliances		N/A
	-other appliances (distance from a wall < 75 mm)		N/A
	-max. temperature rises specified in Table 101		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The temperature of ballast windings and their associated wiring shall not exceed the values specified in 12.4 of IEC 60598-1, when measured under the conditions stated (IEC 60335-2-24:2010)		N/A
11.101	If the temperatures exceed the limits, the test is carried out again (IEC 60335-2-24:2010):		—
	-winding temperatures at the end of a running cycle not higher than the limits given in Table 101		N/A
11.102	Any defrosting system, temperature rises don't exceed the values given in 11.8 (IEC 60335-2-24:2010)		P
	Manual defrosting (IEC 60335-2-24:2010)		N/A
	Automatic defrosting (IEC 60335-2-24:2010)		P
11.103	Heating systems, other than defrosting, temperature rises don't exceed the values given in 11.8 (IEC 60335-2-24:2010)		P
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
	The test of 13.2 does not apply to battery circuit (IEC 60335-2-24:2010)		N/A
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
	Leakage current measurements and limits (IEC 60335-2-24:2010)	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4.....:	(see appended table)	P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	No breakdown during the tests		P
	The test voltage for reinforced insulation is applied between separate circuits for battery operation and mains supply operation (IEC 60335-2-24:2010)		N/A
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
	Lamp covers are not removed (IEC 60335-2-24:2010)		N/A
15	MOISTURE RESISTANCE		—
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance		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

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Clause	Requirement + Test	Result - Remark	Verdict
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		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		P
	Lamp covers are not removed (IEC 60335-2-24:2010)		P
	Overfilling test with additional amount of the solution, over a period of 1 min (l).....:	0,6 L	P
	The appliance withstands the electric strength test of 16.3		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29		P
15.3	Appliances proof against humid conditions		P
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		P
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		P
	Humidity test for 48 h in a humidity cabinet	25 °C, 93% R.H.	P
	Reassembly of those parts that may have been removed		P
	The appliance withstands the tests of clause 16		P
15.101	Spillage of liquid from inside does not affect their electrical insulation (IEC 60335-2-24:2010)		P
	The relevant tests of 15.102, 15.103 and 15.104. are carried out (IEC 60335-2-24:2010)		P
15.102	The apparatus shown in figure 101 is filled with water containing 1 % NaCl and 0.6 % of acid rinsing agent (IEC 60335-2-24:2010)		P
15.103	Appliances, other than built-in appliances, ice-makers and ice-cream appliances, are tilted at an angle of up to 2° (IEC 60335-2-24:2010)		P
	Test with 0.5 l water containing 1 % NaCl and 0.6 % of acid rinsing agent over the top of the appliance (IEC 60335-2-24:2010)		P
15.104	Ice-makers which are directly connected to the water supply, is filled with water as in normal use. The inlet valve is then held open for 1 min (IEC 60335-2-24:2010)		N/A
15.105	Operation of a defrosting system does not affect the electrical insulation of defrost heating elements (IEC 60335-2-24:2010)		P
	If the water is in contact with the defrost heating element or its insulation, test of 22.102 is carried out (IEC 60335-2-24:2010)		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		—
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	Tests carried out at room temperature and not connected to the supply		P
	The test of 16.2 does not apply to battery circuits (IEC 60335-2-24:2010)		N/A
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		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified		N/A
	Limits for class 0I appliances and the various types of class I appliances (IEC 60335-2-24:2010)	(see appended table)	P
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
	The test voltage specified in Table 7 for reinforced insulation is applied between separate circuits for battery operation and mains supply operation (IEC 60335-2-24:2010)		N/A
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		—
	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).....:	1,06 x 240 V = 254,4 V	P
	Basic insulation is not short-circuited		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		—
	Requirements and tests are specified in part 2 when necessary		N/A
19	ABNORMAL OPERATION		—
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe	(see appended table)	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		P
	if applicable, to the test of 19.5		P
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		P
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		P
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A
	Subclauses 19.2 and 19.3 do not apply to heating systems (IEC 60335-2-24:2010)		N/A
	Motor compressors not conforming to IEC 60335-2-34 are subjected to the tests specified in IEC 60335-2-34 19.101, 19.102 and 19.104 (IEC 60335-2-24:2010)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Fan motors of ice-cream appliances are not subject to the locked-rotor test specified in Annex AA (IEC 60335-2-24:2010)		N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		P
	until steady conditions are established		P
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A
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		P
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath		P
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		P
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	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		P
	locking moving parts of other appliances		P
	Locked rotor, capacitors open-circuited one at a time		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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	240 V; Steady circumstance	P
	Winding temperatures not exceeding values specified in table 8	125 K	P
	Fan motors of ice-cream appliances are tested for 5 min (IEC 60335-2-24:2010)		N/A
19.8	Multi-phase motors operated at rated voltage with one phase disconnected		N/A
	Three-phase motor compressors operated at rated voltage with one phase disconnected, unless complying with IEC 60335-2-34 (IEC 60335-2-24:2010)		N/A
19.9	Not applicable (IEC 60335-2-24:2010)		—
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		P
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		N/A
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N/A
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		P
	During and after each test the following is checked:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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		N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		—
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified	RF702N4IS1 (after CE004): 7,58 W RF715N4AS1 (after E7): 4,93 W	P
	- 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		P
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		—
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N/A
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless		P
	they comply with IEC 60384-14		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	RF702N4IS1: D001, ZNR1: fuse opened; D005, T1, C006: not operated; D006: normal working RF715N4AS1: D4, ZNR1: fuse opened; E2, T1, E5: not operated; D2: normal working	P
	This fault condition is not applied between the two circuits of an optocoupler		P

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Clause	Requirement + Test	Result - Remark	Verdict
	e) failure of triacs in the diode mode		N/A
	f) failure of microprocessors and integrated circuits		P
	g) failure of an electronic power switching device		N/A
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		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
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	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 60s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate		N/A
	The appliance continues to operate normally, or		N/A
	requires a manual operation to restart		N/A
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A).....:	Rated: 3,15 A Measured: 15,4 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 V	P
	- supplementary insulation (V)		N/A
	- reinforced insulation (V)	3000 V	P
	Temperature rises not exceeding the values shown in Table 7 or 150 °C for housing of motor-compressors (IEC 60335-2-24:2010)		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		N/A
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		—
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		—
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
	The temperature of the housing of motor-compressors other than those which comply with IEC 60335-2-34 is determined at the end of the test period and shall not exceed 150 °C (IEC 60335-2-24:2010)		N/A
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited		P
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time		N/A
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		P
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		P
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	Heating systems dimensioned and located properly and comply with 19.13 during and after the test (IEC 60335-2-24:2010)		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
19.102	Ice-makers and ice-cream appliances so constructed that they do not cause any risk and comply with 19.13 during and after the tests (IEC 60335-2-24:2010)		N/A
19.103	Appliances intended for camping and similar use tested on an inclined support (5 °) and comply with 19.13 during and after the test (IEC 60335-2-24:2010)		N/A
19.104	Illuminating equipment shall not cause a fire hazard under abnormal operating conditions (IEC 60335-2-24:2010)		P
	Test as specified (IEC 60335-2-24:2010)		P
	Illuminating equipment having discharge lamps is operated under the fault conditions specified in items a), d) and e) of 12.5.1 of IEC 60598-1, the appliance being supplied at rated voltage until temperature stabilisation of the measured parts (IEC 60335-2-24:2010)		N/A
	During and after the test, the appliance shall comply with 19.13 (IEC 60335-2-24:2010)		P
	The temperature of ballast windings and their associated wiring shall not exceed the values specified in 12.5 of IEC 60598-1 when measured under the conditions specified (IEC 60335-2-24:2010)		N/A
19.105	Appliances intended for battery operation properly constructed and comply with 19.13 during and after the test (IEC 60335-2-24:2010)		N/A
20	STABILITY AND MECHANICAL HAZARDS		—
20.1	Appliances having adequate stability	Replaced by part II	N/A
	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		N/A
	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
	Ice-cream appliances shall have adequate stability (IEC 60335-2-24:2010)		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	Not possible to touch dangerous moving parts with the test probe described		P
20.101	Refrigeration appliances and ice-makers shall have adequate stability. Tests according to 20.102, 20.103 and 20.104 (IEC 60335-2-24:2010)		P
	This requirement does not apply to built-in appliances (IEC 60335-2-24:2010)		N/A
20.102	Tests with weights as described		P
	Test with door opened to 90° (IEC 60335-2-24:2010)		P
	Test with door opened to 180° or to the limit of door stop (IEC 60335-2-24:2010)		P
20.103	Test with one of the drawers is pulled to the most onerous out position (IEC 60335-2-24:2010)		P
	Test with two drawers are pulled to the most onerous out position (IEC 60335-2-24:2010)		P
20.104	Test with sliding drawers accessible without opening a door (IEC 60335-2-24:2010)		P
	Doors shelves are loaded as specified in 20.102 and opened 90° (IEC 60335-2-24:2010)		P
21	MECHANICAL STRENGTH		—
	Note 101: Covers of lamps within the appliance are considered likely to be damaged in normal use. Lamps are not tested (IEC 60335-2-24:2010)		—
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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
21.101	Appliances for camping or similar use tested against the effects of dropping and vibration as specified (IEC 60335-2-24:2010)		N/A
21.102	Lamps are protected against mechanical shocks (IEC 60335-2-24:2010)		N/A
22	CONSTRUCTION		—
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		—
	- a supply cord fitted with a plug, or		P
	- 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
	Applied torque not exceeding 0.25 Nm		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	Pull force of 50N to each pin after the appliance has been placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 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 0,1µF, the appliance being disconnected from the supply at the instant of voltage peak		P
	Voltage not exceeding 34 V (V)	Max. 12 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	Compression-type appliances, including protective enclosures of a protected cooling system, using flammable refrigerants shall withstand (IEC 60335-2-24:2010)		—
	- a pressure of 3.5 times the saturated vapour pressure (70 °C)		P
	- a pressure of 5 times the saturated vapour pressure (20 °C)		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N/A
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		N/A
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		N/A
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner, 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		P
	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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
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
	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	Not applicable to refrigeration appliances and ice-makers (IEC 60335-2-24:2010)		—
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		P
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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
22.27	Parts connected by protective impedance separated by double or reinforced insulation		P
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	Electrodes not used for heating liquids		N/A
	For class II constructions, conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts, not in direct contact with basic or reinforced insulation, unless		P
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
	Heating conductors having only one layer of insulation are not in direct contact with water or ice during normal use (IEC 60335-2-24:2010)		N/A
	NOTE : Frozen water is regarded as a conducting liquid (IEC 60335-2-24:2010)		P
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	This requirement does not apply to handles, levers and knobs on stationary appliances and cordless appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		P
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N/A
	they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		N/A
22.39	Lamp holders used only for the connection of lamps		N/A
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
	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		P
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		P
	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		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
	No leakage from any part, including any inlet water hose		P
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		P
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		—
	- continuously, or		N/A
	- automatically, or		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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 distinguished from other manual devices by means of shape, size, surface texture or position		N/A
	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		N/A
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
22.101	Lampholders properly fixed (IEC 60335-2-24:2010)		N/A
	NOTE: Normal use includes replacement of lamps (IEC 60335-2-24:2010)		N/A
	Test with torque of (IEC 60335-2-24:2010):		N/A
	Lampholders for a fluorescent lamp shall comply with the test of 4.4.4 i) in IEC 60598-1 (IEC 60335-2-24:2010)		N/A
22.102	Insulated wire heaters and their joints protected against entry of water (IEC 60335-2-24:2010)		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	3 heating elements: 24 h immersion in water with 1 % NaCl; electric strength test between heating conductor and water (1'250 V, 15 min) (IEC 60335-2-24:2010)		P
22.103	Appliances employing a transcritical refrigeration system shall in the high pressure side of the refrigeration system include a pressure relief device on the compressor or between the compressor and the gas cooler. There shall be no shut off devices or other components except piping between the compressor and the pressure relief device, which could introduce a pressure drop. (IEC 60335-2-24:2010)		N/A
	Pressure relief device installed as described (IEC 60335-2-24:2010)		N/A
	Test of pressure relief device as described (IEC 60335-2-24:2010)		N/A
22.104	Appliances with two or more temperature control devices controlling the same motor-compressor don't cause undue operation of the thermal motor-protector (IEC 60335-2-24:2010)		N/A
	The test is carried out separately with each combination of control devices (IEC 60335-2-24:2010)		N/A
22.105	Appliances which can also be battery operated, the battery circuit is insulated from live parts by double insulation or reinforced insulation (IEC 60335-2-24:2010)		N/A
	It is not possible to touch live parts when making the connections to the battery (IEC 60335-2-24:2010)		N/A
	Specified for double insulation or reinforced insulation (IEC 60335-2-24:2010)		N/A
22.106	The mass of refrigerant (flammable refrigerant) shall not exceed 150 g (IEC 60335-2-24:2010)		P
22.107	Compression-type appliances with a protected cooling system and which use flammable refrigerants shall be constructed to avoid any fire or explosion hazard, in the event of leakage of the cooling system (IEC 60335-2-24:2010)		P
22.107.1	A leakage is simulated at the most critical point of the cooling system (method as specified) (IEC 60335-2-24:2010)		P
	Measured as specified		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	The measured value shall not exceed 75 % LEL of the refrigerant (Table 102) and shall not exceed 50 % LEL for a period exceeding 5 min. (IEC 60335-2-24:2010)		P
22.107.2	All accessible surfaces of protected cooling system components, are scratched using the tool whose tip is shown in figure 102 (IEC 60335-2-24:2010)		P
	The tool is applied using the following parameters (IEC 60335-2-24:2010):		—
	- force at right angles to the surface to be tested 35 N + 3 N		P
	- force parallel to the surface to be tested 250 N		P
	The appropriate part shall withstand the test of 22.7 reduced by 50 % (IEC 60335-2-24:2010)		P
22.107.3	If aluminium having a purity of less than 99.5 % according to ISO 209 is used in a protected cooling system that is embedded in thermal insulation, a sample of the cooling system is subjected to the salt mist test of IEC 60068-2-11 for a test duration of 48 h. (IEC 60335-2-24:2010)		P
22.108	Compression-type appliances with unprotected cooling systems and which use flammable refrigerants, any electrical apparatus other than non-self-resetting protective devices, shall be tested and found to comply with the requirements in Annex CC for group IIA gases or the refrigerant used (IEC 60335-2-24:2010)		N/A
	Refrigerant leakage into food storage shall not result in an explosive atmosphere outside the food storage compartment in areas where electrical apparatus are mounted, except in those areas which contain only non-self-resetting protective devices, necessary for compliance with the requirements in Annex CC for group IIA gases or the refrigerant used (IEC 60335-2-24:2010)		N/A
	The measured value shall not exceed 75 % LEL of the refrigerant (Table 102) and shall not exceed 50 % LEL for a period exceeding 5 min (IEC 60335-2-24:2010)		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
22.109	Compression-type appliance which use flammable refrigerants shall be constructed so that leaked refrigerant will not stagnate so as to cause a fire hazard in areas outside the food storage compartments where the appliance's electrical components, other than non-self-resetting protective devices necessary for compliance with Clause 19, are fitted (IEC 60335-2-24:2010)		P
	Unless the electrical components comply least with the requirements in Annex CC for group IIA gases or the refrigerant used (IEC 60335-2-24:2010)		P
	Test: A quantity equal to 50 % + 1.5 g of the refrigerant charge is injected into the considered area (IEC 60335-2-24:2010)		P
	The measured value shall not exceed 75 % LEL of the refrigerant (Table 102) and shall not exceed 50 % LEL for a period exceeding 5 min (IEC 60335-2-24:2010)		P
22.110	Temperatures on surfaces be exposed to leakage of flammable refrigerants shall not exceed the ignition temperature (Table 102) reduced by 100 K (IEC 60335-2-24:2010)		P
22.111	In compression-type appliances which use flammable refrigerant: Prevention from galvanic coupling in contact points between uncoated aluminium and copper pipes (or similar metals) by positive means such as the use of insulated sleeving or spacers. (IEC 60335-2-24:2010)		P
22.112	Doors and lids of compartments in appliances with a free space shall be capable of being opened from the inside (IEC 60335-2-24:2010)		P
	The door shall open before the force exceeds 70 N (IEC 60335-2-24:2010)	40 N	P
22.113	Drawers which are only accessible after openings a door or lid shall not contain a free space (IEC 60335-2-24:2010)		P
22.114	Drawers which are accessible without opening a door and which contain a free space shall have an opening in their rear wall and be capable of being opened from the inside (IEC 60335-2-24:2010)		P
	The drawers shall open before the force exceeds 70 N (IEC 60335-2-24:2010)		P

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
22.115	Appliances for household use which contain compartments with a free space any door or drawer shall not be fitted with a self-latching lock (IEC 60335-2-24:2010)		P
	Key operated locks shall require two independent movements to actuate the lock or be of a type that automatically ejects the key when unlocked (IEC 60335-2-24:2010)		N/A
22.116	Accessible glass panels with an area having any two orthogonal dimensions exceeding 75 mm shall be either made from glass that shatters into small pieces when broken or be made from glass that has enhanced mechanical strength. (IEC 60335-2-24:2010)		P
	Tested as described – small pieces (IEC 60335-2-24:2010)		P
	Tested as described – glass doesn't break or crack (IEC 60335-2-24:2010)		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		P
	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		P
	Flexible metallic tubes not causing damage to insulation of conductors		P
	Open-coil springs not used		N/A
	NOTE : It does not apply to external conductors (IEC 60335-2-24:2010)		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	No damage after 100 000 flexings for conductors flexed during normal use, or (IEC 60335-2-24:2010)		P
	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		P
	Not more than 10% of the strands of any conductor broken, and		P
	not more than 30% for wiring supplying circuits that consume no more than 15W		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use		P
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		N/A
	no breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
	For class II construction, the requirements for supplementary insulation and reinforced insulation apply,		P
	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		P
	be such that it can only be removed by breaking or cutting		N/A
23.7	The colour combination green/yellow only used for earthing conductors		P
23.8	Aluminium wires not used for internal wiring		P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	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
	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		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N/A
	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
	Motor-compressors are not required to be separately tested according to (IEC 60335-2-34) nor are they required to meet the requirements of (IEC 60335-2-34) if they meet the requirements of this standard (IEC 60335-2-24:2010)		N/A
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, 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
	Safety isolating transformers comply with IEC 61558-2-6		P
	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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	The number of operations for other switches (IEC 60335-2-24:2010):		—
	- quick-freeze switches: 300		N/A
	- manual and semi-automatic defrost switches 300		N/A
	- door switches 50 000		P
	- on/off switches 300		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: 10 000		N/A
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		N/A
	- voltage maintained non-self-resetting thermal cut-outs: 1 000		N/A
	- other non-self-resetting thermal cut-outs: 30		N/A
	- timers: 3 000		N/A
	- energy regulators: 10 000		N/A
	- self-resetting thermal cut-outs which may influence the test results of 19.101 and which are not short-circuited during this test: (IEC 60335-2-24:2010) 100 000		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	- thermostats which control the motor-compressor: (IEC 60335-2-24:2010) 100 000		N/A
	- motor-compressor starting relays: (IEC 60335-2-24:2010) 100 000		N/A
	- automatic thermal motor-protectors for motor-compressors of the hermetic and semi-hermetic type: (IEC 60335-2-24:2010) 2 000 or acc to 15 day-test		N/A
	- manual reset thermal motor-protectors for motor-compressors of the hermetic and semi-hermetic type: (IEC 60335-2-24:2010) 50		N/A
	- other automatic thermal motor-protectors: except for fan-motors (IEC 60335-2-24:2010) 2 000		N/A
	- other manual test thermal motor protectors: (IEC 60335-2-24:2010) 30		N/A
	- for pressure relief devices of the bursting disc type, three separate samples of the appropriate parts of the refrigeration system are tested and the bursting disc shall operate in the same way for each sample tested (IEC 60335-2-24:2010) 1		N/A
	- electrical pressure relief devices for automatic operation: (IEC 60335-2-24:2010) 30 000		N/A
	- electrical pressure relief devices for manual reset: (IEC 60335-2-24:2010) 300		N/A
	Electrical pressure relief devices comply with IEC 60730-2-6 and with listed additional requirements (IEC 60335-2-24:2010)		N/A
	Requirement for mechanical pressure relief devices (IEC 60335-2-24:2010)		N/A
	Testing of pressure relief devices of the bursting disc type with the appliance if not certified (IEC 60335-2-24:2010). Marking of devices as mentioned (A1:12)		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

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	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		N/A
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691		P
	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	1E5	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
	Appliances for camping or similar use (IEC 60335-2-24:2010):		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		P
	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	Rated: 450 V; Measured: 327 V	P
	For starting capacitors, the voltage across the capacitors shall not exceed 1.3 times the rated voltage of the capacitor at 1.1xUn (IEC 60335-2-24:2010)		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		P
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		P
	One or more of the following conditions are to be met:		—
	- the capacitors are of class S2 or S3 according to IEC 60252-1		P
	- the capacitors are housed within a metallic or ceramic enclosure		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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	Lampholders shall be of the insulated type (IEC 60335-2-24:2010)		N/A
24.102	The discharge capacity of the pressure relief device shall be such that it is able to release an adequate amount of refrigerant so that the pressure during the release of the refrigerant does not increase beyond the pressure setting of the pressure relief device even if the compressor is operating (IEC 60335-2-24:2010)		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		—
	Motor-compressors with facilities for connecting a supply cord, complying with the appropriate requirements of IEC 60335-2-34 are not subjects to the following tests (IEC 60335-2-24:2010)		P
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		—
	- 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
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
	Mains-operated appliances provided with not more than one means of connection to the supply unless (IEC 60335-2-24:2010)		N/A
	- the appliance consists of two or more completely independent units built together in one enclosure (IEC 60335-2-24:2010)		N/A

IEC 60335-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
	- the relevant circuits are adequately insulated from each other (IEC 60335-2-24:2010)		N/A
	Appliances which can be both mains and battery operated shall be provided with a separate means for connection (IEC 60335-2-24:2010)		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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		—
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- 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		—
	<ul style="list-style-type: none"> light polyvinyl chloride sheathed cord (60227 IEC 52) is allowed regardless of the mass of the appliance (IEC 60335-2-24:2010) 		N/A
	<ul style="list-style-type: none"> ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances 	H05VV-F 60227 IEC 53	P
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		—
	<ul style="list-style-type: none"> heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56) is allowed regardless of the mass of the appliance (IEC 60335-2-24:2010) 		N/A
	<ul style="list-style-type: none"> heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances 		N/A
	- halogen-free, low smoke, thermoplastic insulated and sheathed		—
	<ul style="list-style-type: none"> light duty halogen-free low smoke flexible cable (62821 IEC 101) for circular cable and (62821 IEC 101f) for flat cable 		N/A
	<ul style="list-style-type: none"> 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
	This subclause does not apply to flexible leads used to connect an appliance to a SELV power supply (IEC 60335-2-24:2010)		N/A
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm ²).....:	Rated current: 0,9 A Cross-sectional area: 0,75 mm ²	P

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
	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
	Does not apply to flexible leads used to connected an appliance to a SELV power supply (IEC 60335-2-24:2010)		N/A
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		—
	- applied force (N).....:		N/A
	- number of flexings :		N/A
	The test does not result in:		—
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
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):	100 N, 0,35 Nm	P
	Cord not damaged and max. 2 mm displacement of the cord	0 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
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	Constructed so that the cord can only be fitted with the aid of a tool		N/A
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	The conductors of the supply cord for type Y and Z attachment insulated from accessible metal parts		P
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		—
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N/A
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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
	Interconnection cord for battery operated appliances (IEC 60335-2-24:2010)		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected		N/A
25.25	Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet.		N/A
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N/A
25.101	Appliances which can be battery operated shall have suitable means for connection of the battery as specified (IEC 60335-2-24:2010)		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		—
	This clause of part 1 is not applicable to those parts of motor-compressors with facilities for connecting a supply cord and complying with IEC 60335-2-34 (IEC 60335-2-24:2010)		P

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Clause	Requirement + Test	Result - Remark	Verdict
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		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

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Clause	Requirement + Test	Result - Remark	Verdict
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and		N/A
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened		N/A
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and,		N/A
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection between live parts and accessible metal parts, between battery supply terminals if any (IEC 60335-2-24:2010)		N/A
27	PROVISION FOR EARTHING		—
	Compliance is not checked on parts related to motor-compressors if the motor-compressor complies with IEC 60335-2-34 (IEC 60335-2-24:2010)		P
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P
	Class 0, II and III appliances have no provision for protective earthing		N/A
	Class II appliances and class III appliances can incorporate an earth for functional purposes		N/A
	Safety extra-low voltage circuits not earthed, unless		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

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Clause	Requirement + Test	Result - Remark	Verdict
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
	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)	Max.: 0,085 Ω	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		—
	Compliance is not checked on parts related to motor-compressors if the motor-compressor complies with IEC 60335-2-34 (IEC 60335-2-24:2010)		P
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		N/A
	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		P
	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:		—
	<ul style="list-style-type: none"> 30.2.2 is applicable and that carry a current not exceeding 0,5 A 		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	<ul style="list-style-type: none"> 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		N/A
	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,		N/A
	- during user maintenance,		N/A
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		N/A
	At least two screws being used for each connection providing earthing continuity, unless		P
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		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

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless.....:	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		P
	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
	- 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		P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage.....:	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		P
29.1.4	Clearances for functional insulation are the largest values determined from:		—
	- table 16 based on the rated impulse voltage.....:	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		P
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		P
	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		N/A
	Lacquered conductors of windings considered to be bare conductors		P
	However, clearances at crossover points are not measured		N/A
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		—
	- table 16 based on the rated impulse voltage.....:		N/A
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	Pollution degree 2 applies, unless	Outside of compartment	P
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- insulation subjected to conductive pollution; pollution degree 3	Inside of compartment	P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
	Insulation in refrigeration appliances and ice-makers is in pollution degree 3 and shall have a CTI value of 250 unless the insulation is to be protected to pollution by condensation (IEC 60335-2-24:2010)		P
	Not applicable for functional insulation if working voltage < 50 V (IEC 60335-2-24:2010)		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....	(see appended table)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 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		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		—
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- for insulation, other than single layer internal wiring insulation, by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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 cover board for fan / defrost heater: 3,1 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		P
	Reinforced insulation consist of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		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
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	Not applied to parts of motor-compressor if complies with IEC60335-2-34 (IEC 60335-2-24:2010)		P
	Accessible parts within the storage compartment 65 °C (IEC 60335-2-24:2010)		P
	Note 102: The temperature rises attained during the test of 19.101 are not taken into account. (IEC 60335-2-24:2010)		—
30.2	Parts of non-metallic material resistant to ignition and spread of fire		P
	Not applied to parts of motor-compressor if complies with IEC60335-2-34 with no ignition (IEC 60335-2-24:2010)		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		N/A
	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
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
30.2.2	Not applicable (IEC 60335-2-24:2010)		—

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Clause	Requirement + Test	Result - Remark	Verdict
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
30.2.3.2	Parts of non-metallic material supporting connections, and		P
	parts of non-metallic material within a distance of 3mm,		P
	subjected to 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:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of Annex E, or		N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	The consequential needle-flame test of Annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		—
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		N/A
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts for which the needle-flame test of Annex E was applied, or		N/A
	- small parts for which a material classification of V-0 or V-1 was applied		N/A
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		—
	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or		N/A
	- parts shielded by a flame barrier that meets the needle-flame test of Annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of Annex E	(see appended table 30.2/30.2.4)	P
	Test not applicable to conditions as specified:		N/A
31	RESISTANCE TO RUSTING		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Relevant ferrous parts adequately protected against rusting		P
	Tests specified in part 2 when necessary		N/A
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		—
	Not applicable (IEC 60335-2-24:2010)		—
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		—
	Description of routine tests to be carried out by the manufacturer		N/A
AA	ANNEX AA, (NORMATIVE) LOCKED-ROTOR TEST OF FAN MOTORS (IEC 60335-2-24:2010)		—
	The winding of a fan motor does not reach excessive temperatures if the motor locks or fails to start		P
	The motor is supplied at rated voltage according to supply circuit fig. AA.1.		P
	Tests as described		P
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
	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

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Clause	Requirement + Test	Result - Remark	Verdict
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
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:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	This annex does not apply to motor-compressors (IEC 60335-2-24:2010)		N/A
CC	ANNEX CC (NORMATIVE) NON-SPARKING “N” ELECTRICAL APPARATUS		—
	Where reference is made to IEC 60079-15, the following clauses are applicable as modified below (IEC 60335-2-24:2010)		—
11	Supplementary requirements for non-sparking luminaires (A1:12)		—
	All subclauses of Clause 11 are applicable, except 11.2.4.1, 11.2.4.5, 11.2.5, 11.2.6, 11.2.7, 11.3.4, 11.3.5, 11.3.6 and 11.4 (A1:12)		N/A
16	General supplementary requirements for apparatus producing arcs, sparks or hot surfaces (A1:12)		P
17	Supplementary requirements for enclosed-break devices and non-incendive components producing arcs, sparks or hot surfaces (A1:12)		P

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Clause	Requirement + Test	Result - Remark	Verdict
18	Supplementary requirements for hermetically sealed devices producing arcs, sparks or hot surfaces (A1:12)		N/A
19	Supplementary requirements for sealed devices producing arcs, sparks or hot surfaces (A1:12)		—
	All of the subclauses of Clause 19 are applicable, except 19.1 and 19.6, which are replaced by the following (A1:12)		P
19.1	Non-metallic materials (A1:12)		—
	Seals are tested using 22.5. However if the device is tested in the appliance, then 22.5.1 and 22.5.2 are not applicable (A1:12)		P
	After the tests of Clause 19 in IEC 60335-2-24, by inspection, no damage that could impair the type of protection shall be evident (A1:12)		P
19.6	Type tests (A1:12)		—
	The type tests described in 22.5 shall be performed where relevant (A1:12)		N/A
20	Supplementary requirements for restricted-breathing enclosures protecting apparatus producing arcs, sparks or hot surfaces (A1:12)		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
	This annex does not apply to motor-compressors or condenser fan motors (IEC 60335-2-24:2010)		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:		P
7	Severities		—
	The duration of application of the test flame is 30 s ± 1 s		P
9	Test procedure		—

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	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		—

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Clause	Requirement + Test	Result - Remark	Verdict
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		—
	This subclause is applicable		N/A
4.14	Endurance		—
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable		N/A
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	No visible damage		N/A
4.17	Passive flammability test		—
	This subclause is applicable		N/A
4.18	Active flammability test		—
	This subclause is applicable		N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	are not subjected to the tests		N/A
	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation		N/A
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1		N/A
	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K)		N/A
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		—
	Clause 20 is applicable to clearances across full disconnection and micro-disconnection		N/A
	It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24		N/A
I	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:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		—
22.1.101	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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		N/A
	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	Outside of compartment	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected	Inside of compartment	P
	- 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		—
	The proof voltage is 100V, 175V, 400V or 600V	250 V for connectors, LED cover, cover board for fan / defrost heater, fan motor bobbins, compartment plastic, enclosure of pillar heater, ice maker motor	P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N/A
10.2	Report		—
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
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		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, 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 150V, 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
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		—
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		—

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

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Clause	Requirement + Test	Result - Remark	Verdict
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:	Software Id:	N/A
	The specification of the software safety requirements includes the descriptions listed		N/A
R.3.2.2	Software architecture		—

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Clause	Requirement + Test	Result - Remark	Verdict
R.3.2.2.1	The specification of the software architecture includes the aspects listed - techniques and measures to control software faults/errors (refer to R.2.2); - interactions between hardware and software; - partitioning into modules and their allocation to the specified safety functions; - hierarchy and call structure of the modules (control flow); - interrupt handling; - data flow and restrictions on data access; - architecture and storage of data; - time-based dependencies of sequences and data	Document ref. No:	N/A
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 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 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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Clause	Requirement + Test		Result - Remark			Verdict
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
<p>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.</p> <p>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.</p>						

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	

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Clause	Requirement + Test	Result - Remark	Verdict
	– IP number according to degree of protection against ingress of water, other than IPX0.....:		N/A
	– type reference of battery or batteries:		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
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
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

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10.1/10.101	TABLE: Power input deviation					P
Input deviation of/at:	P rated (W)	P measured (W)	ΔP	Required ΔP	Remark	
Defrost heater (refrigerated storage)						
230 V; 50 Hz	100	100,6	+0,6 %	± 10 %	Anze	
230 V; 50 Hz	100	103,2	+3,2 %	± 10 %	Jian Long	
Defrost heater (freezing storage)						
230 V; 50 Hz	240	245,3	+2,21 %	+5 %, -10 %	Anze	
Pillar heater						
230 V; 50 Hz	16	16,2	+1,25 %	+ 20 %	Anze	
230 V; 50 Hz	16	15,8	-1,25 %	+ 20 %	Jian Long	
Water pipe heater						
230 V; 50 Hz	2	1,93	-3,5 %	+ 20 %	Anze	
230 V; 50 Hz	2	1,92	-4,0 %	+ 20 %	Jian Long	
Supplementary information:						

10.2	TABLE: Current deviation					P
Current deviation of/at:	I rated (A)	I measured (A)	ΔI	Required ΔI	Remark	
230 V; 50 Hz	0,9	0,835	-7,22 %	+20 %	See Tests performed	
230 V; 50 Hz	0,9	0,826	-8,22 %	+20 %	See Tests performed	
230 V; 50 Hz	0,9	0,842	-6,44 %	+20 %	Different main control unit	
Supplementary information:						

11.8	TABLE: Heating test			P
	Test voltage (V).....:	254,4 V		—
	Ambient (°C)	42,5 / 44,0		—
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Supply cord		3,4	50-7=43	
Supply cord sheath		3,1	35-7=28	
Power PCB bracket / box		3,5	For clause 30.1	
Power PCB		5,7	120-7=113	
Terminals on PCB		4,3	For clause 30.1	
Varistors		5,2	T85-25-7=53	

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X capacitors	8,4	50
Inductor bobbin / winding	6,3	65-7=58
Transformer bobbin / winding	15,7	85=7=78
Y capacitors	9,3	T85-25-7=53
Opto-coupler	12,4	T100-25-7=68
Relay (for compressor)	20,4	T70-25-7=38
Relay (for other loads)	5,1	T65-25-7=33
Solid state relay	0,2	T85-25-7=53
Compressor housing	40,5	150 °C
Compressor discharge pipe	42,3	150 °C
Running cap for compressor	6,1	T70-25-7=38
Valve bobbin / winding 1	3,0	80-7=73
Valve bobbin / winding 2	5,2	80-7=73
Water switch	5,7	T85-25-7=53
Capacitor for valve	6,0	50
Connectors	-5 °C	For clause 30.1
Control panel	5,8	60-7=53
Control PCB	9,0	120-7-113
Plastic cover / control PCB bracket	9,2	For clause 30.1
LED cover	36,8 °C	For clause 30.1
LED PCB	38,8 °C	120-7-113
Cover board for fan / defrost heater (refrigerated compartment)	-18 °C	For clause 30.1
Defrost heater surface (refrigerated compartment)	-22,7 °C	460°C - 100=360°C
Thermal link (refrigerated compartment)	-6 °C	Ref.
Fan motor bobbin / winding (refrigerated compartment)	32,8 °C	65-7=58
Compartment plastic	38,4 °C	For clause 30.1
Pillar heater surface	10,4	460°C - 100=360°C
Enclosure of pillar heater	7,5	For clause 30.1
Defrost heater surface (freezing compartment)	-19,3 °C	460°C - 100=360°C
Thermal link (freezing compartment)	-21,2 °C	Ref.
Door switch	3,3	T65-25-7=33
Fan motor winding (freezing compartment)	-22 °C	65-7=58
Heater for water pipe	-20,5 °C	460°C - 100=360°C

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Ice maker motor enclosure		-21,2 °C		65-7=58		
Test corner		3,3		60-7=53		
Supplementary information:						
11.8	TABLE: Heating test, resistance method				P	
	Test voltage (V).....:	254,4			—	
	Ambient, t1 (°C).....:	42,5			—	
	Ambient, t2 (°C).....:	44,0			—	
Temperature rise of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class
Valve winding 1		1692,80	1754,90	8,66	90-7=83	Class E
Valve winding 2		1274,90	1335,90	11,75	90-7=83	Class E
Supplementary information:						
RF702N4IS1	Compressor	NX1119Y				
	Defrost heater (refrigerated storage)	Anze				
	Defrost heater (freezing storage)	Anze				
	Pillar heater	Anze				
	Water pipe heater	Anze				
	Fan motor (F)	Powerful				
	Fan motor (R)	NIDEC				

11.8/11.102	TABLE: Heating test			P
	Test voltage (V).....:		254,4 V	—
	Ambient (°C)		43,6 / 42,9	—
Thermocouple locations:		Max. temperature rise measured, Δ T (K)		Max. temperature rise limit, Δ T (K)
Supply cord		1,9		50-7=43
Supply cord sheath		2,1		35-7=28
Power PCB bracket / box		1,6		For clause 30.1
Power PCB		5,4		120-7=113
Terminals on PCB		1,6		For clause 30.1
Varistors		4,1		T85-25-7=53
X capacitors		7,0		50
Inductor bobbin / winding		5,4		65-7=58
Transformer bobbin / winding		18,9		85=7=78
Y capacitors		9,2		T85-25-7=53
Opto-coupler		13,3		T100-25-7=68

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Relay (for compressor)	19,3	T70-25-7=38	
Relay (for other loads)	9,5	T65-25-7=33	
Solid state relay (IC2)	3,0	T85-25-7=53	
Compressor housing	42,3	150 °C	
Compressor discharge pipe	44,5	150 °C	
Running cap for compressor	4,3	T70-25-7=38	
Valve bobbin / winding 1	5,1	80-7=73	
Valve bobbin / winding 2	24,7	80-7=73	
Water switch	5,5	T85-25-7=53	
Capacitor for valve	5,9	50	
Connectors	4,3	For clause 30.1	
Control panel	5,9	60-7=53	
Control PCB	6,7	120-7-113	
Plastic cover / control PCB bracket	6,9	For clause 30.1	
LED cover	40,6 °C	For clause 30.1	
LED PCB	41 °C	120-7-113	
Cover board for fan / defrost heater (refrigerated compartment)	11,6	For clause 30.1	
Defrost heater surface (refrigerated compartment)	215,2	460°C - 100=360°C	
Thermal link (refrigerated compartment)	2,3 °C	Ref.	
Fan motor bobbin / winding (refrigerated compartment)	34 °C	65-7=58	
Compartment plastic	39,8 °C	For clause 30.1	
Pillar heater surface	26,1	460°C - 100=360°C	
Enclosure of pillar heater	20,4	For clause 30.1	
Defrost heater surface (freezing compartment)	109,2	460°C - 100=360°C	
Thermal link (freezing compartment)	-11,4 °C	Ref.	
Door switch	9,0	T65-25-7=33	
Fan motor winding (freezing compartment)	-13,5 °C	65-7=58	
Heater for water pipe	-10,9 °C	460°C - 100=360°C	
Ice maker motor enclosure	-11,8 °C	65-7=58	
Test corner	3,1	60-7=53	
Supplementary information:			
11.8	TABLE: Heating test, resistance method		N/A
	Test voltage (V).....:		—
	Ambient, t1 (°C).....:		—

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		Ambient, t2 (°C).....:				—	
Temperature rise of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class	
Supplementary information:							
RF702N4IS1	Compressor	NX1119Y					
	Defrost heater (refrigerated storage)	Anze					
	Defrost heater (freezing storage)	Anze					
	Pillar heater	Anze					
	Water pipe heater	Anze					
	Fan motor (F)	Powerful					
	Fan motor (R)	NIDEC					

11.8	TABLE: Heating test			P
	Test voltage (V).....:	254,4 V		—
	Ambient (°C)	42,3 / 42,3		—
Thermocouple locations:		Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)	
Supply cord		2,5	50-7=43	
Supply cord sheath		2,1	35-7=28	
Power PCB bracket / box		1,7	For clause 30.1	
Power PCB		5,9	120-7=113	
Terminals on PCB		2,2	For clause 30.1	
Varistors		4,6	T85-25-7=53	
X capacitors		8,1	50	
Inductor bobbin / winding		5,4	65-7=58	
Transformer bobbin / winding		17,6	85-7=78	
Y capacitors		9,7	T85-25-7=53	
Opto-coupler		12,6	T100-25-7=68	
Relay (for compressor)		19,7	T70-25-7=38	
Relay (for other loads)		4,7	T65-25-7=33	
Solid state relay (IC2)		1,3	T85-25-7=53	
Compressor housing		40,2	150 °C	
Compressor discharge pipe		46,8	150 °C	
Running cap for compressor		4,9	T70-25-7=38	
Valve bobbin / winding 1		4,6	80-7=73	

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Valve bobbin / winding 2	7,6	80-7=73
Water switch	6,6	T85-25-7=53
Capacitor for valve	8,0	50
Connectors	2,8 °C	For clause 30.1
Control panel	7,3	60-7=53
Control PCB	9,7	120-7-113
Plastic cover / control PCB bracket	9,5	For clause 30.1
LED cover	13,9 °C	For clause 30.1
LED PCB	17,2 °C	120-7-113
Cover board for fan / defrost heater (refrigerated compartment)	-1,4 °C	For clause 30.1
Defrost heater surface (refrigerated compartment)	3,2 °C	460°C - 100=360°C
Thermal link (refrigerated compartment)	1 °C	Ref.
Fan motor bobbin / winding (refrigerated compartment)	7,7 °C	65-7=58
Compartment plastic	16,5 °C	For clause 30.1
Pillar heater surface	9,6	460°C - 100=360°C
Enclosure of pillar heater	5,2	For clause 30.1
Defrost heater surface (freezing compartment)	-10,4 °C	460°C - 100=360°C
Thermal link (freezing compartment)	-12,4 °C	Ref.
Door switch	15,9 °C	T65-25-7=33
Fan motor winding (freezing compartment)	-11,7 °C	65-7=58
Heater for water pipe	-6,2 °C	460°C - 100=360°C
Ice maker motor enclosure	-9,9 °C	65-7=58
Test corner	3,7	60-7=53

Supplementary information:

11.8	TABLE: Heating test, resistance method					P
	Test voltage (V).....:		254,4		—	
	Ambient, t1 (°C).....:		42,3		—	
	Ambient, t2 (°C).....:		42,3		—	
Temperature rise of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class
Valve winding		1692,70	1748,80	9,17	90-7=83	Class E
Valve winding		1275,10	1335,80	13,18	90-7=83	Class E

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Supplementary information:

RF702N4IS1	Compressor	NX1119Y
	Defrost heater (refrigerated storage)	Jian Long
	Defrost heater (freezing storage)	Anze
	Pillar heater	Jian Long
	Water pipe heater	Jian Long
	Fan motor (F)	Taixin
	Fan motor (R)	NIDEC

11.8/11.102	TABLE: Heating test		P
	Test voltage (V).....:	254,4 V	—
	Ambient (°C)	42,8 / 43,8	—
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord		4,0	50-7=43
Supply cord sheath		4,0	35-7=28
Power PCB bracket / box		2,6	For clause 30.1
Power PCB		9,7	120-7=113
Terminals on PCB		4,6	For clause 30.1
Varistors		6,1	T85-25-7=53
X capacitors		8,9	50
Inductor bobbin / winding		8,8	65-7=58
Transformer bobbin / winding		24,7	85-7=78
Y capacitors		12,3	T85-25-7=53
Opto-coupler		17,5	T100-25-7=68
Relay (for compressor)		20,9	T70-25-7=38
Relay (for other loads)		13,0	T65-25-7=33
Solid state relay (IC2)		4,9	T85-25-7=53
Compressor housing		42,3	150 °C
Compressor discharge pipe		50,7	150 °C
Running cap for compressor		5,2	T70-25-7=38
Valve bobbin / winding 1		8,7	80-7=73
Valve bobbin / winding 2		8,7	80-7=73
Water switch		6,4	T85-25-7=53
Capacitor for valve		10,3	50
Connectors		0,4	For clause 30.1

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Control panel	10,7	60-7=53
Control PCB	11,5	120-7-113
Plastic cover / control PCB bracket	11,2	For clause 30.1
LED cover	31,1 °C	For clause 30.1
LED PCB	32,9 °C	120-7-113
Cover board for fan / defrost heater (refrigerated compartment)	1,1	For clause 30.1
Defrost heater surface (refrigerated compartment)	239,4	460°C - 100=360°C
Thermal link (refrigerated compartment)	1,1	Ref.
Fan motor bobbin / winding (refrigerated compartment)	2,7	65-7=58
Compartment plastic	2,5	For clause 30.1
Pillar heater surface	15,4	460°C - 100=360°C
Enclosure of pillar heater	10,8	For clause 30.1
Defrost heater surface (freezing compartment)	124,4	460°C - 100=360°C
Thermal link (freezing compartment)	0,5 °C	Ref.
Door switch	2,6	T65-25-7=33
Fan motor winding (freezing compartment)	-0,2 °C	65-7=58
Heater for water pipe	1,7 °C	460°C - 100=360°C
Ice maker motor enclosure	0,3 °C	65-7=58
Test corner	3,0	60-7=53

Supplementary information:

11.8	TABLE: Heating test, resistance method					N/A
	Test voltage (V).....:					—
	Ambient, t1 (°C).....:					—
	Ambient, t2 (°C).....:					—
Temperature rise of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class

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Supplementary information:

RF702N4IS1	Compressor	NX1119Y
	Defrost heater (refrigerated storage)	Jian Long
	Defrost heater (freezing storage)	Anze
	Pillar heater	Jian Long
	Water pipe heater	Jian Long
	Fan motor (F)	Taixin
	Fan motor (R)	NIDEC

11.8	TABLE: Heating test		P
	Test voltage (V).....:	254,4 V	—
	Ambient (°C)	42,1 / 42,5	—
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord		1,7	50-7=43
Supply cord sheath		3,2	35-7=28
Power PCB bracket / box		0,4	For clause 30.1
Power PCB		1,3	120-7=113
Terminals on PCB		1,7	For clause 30.1
Varistors		2,0	T85-25-7=53
X capacitors		0,8	50
Inductor bobbin / winding		2,1	65-7=58
Transformer bobbin / winding		16,0	85-7=78
Y capacitors		6,7	T85-25-7=53
Opto-coupler		9,5	T100-25-7=68
Relay (for compressor)		14,6	T70-25-7=38
Relay (for other loads)		1,9	T65-25-7=33
Solid state relay (IC2)		41,9 °C	T85-25-7=53
Compressor housing		39,3	150 °C
Compressor discharge pipe		46,4	150 °C
Running cap for compressor		3,0	T70-25-7=38
Connectors		21,9 °C	For clause 30.1
Control panel		6,7	60-7=53
Control PCB		6,4	120-7-113
Plastic cover / control PCB bracket		9,1	For clause 30.1
LED cover		21,4 °C	For clause 30.1

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LED PCB	22,3 °C	120-7-113
Cover board for fan / defrost heater (refrigerated compartment)	15,8 °C	For clause 30.1
Defrost heater surface (refrigerated compartment)	8,9 °C	460°C - 100=360°C
Thermal link (refrigerated compartment)	6,3 °C	Ref.
Fan motor bobbin / winding (refrigerated compartment)	15,5 °C	65-7=58
Compartment plastic	24,8 °C	For clause 30.1
Pillar heater surface	16,1	460°C - 100=360°C
Enclosure of pillar heater	11,4	For clause 30.1
Defrost heater surface (freezing compartment)	-8,8 °C	460°C - 100=360°C
Thermal link (freezing compartment)	-10 °C	Ref.
Door switch	1,5	T65-25-7=33
Fan motor winding (freezing compartment)	-12,3 °C	65-7=58
Test corner	12,6	60-7=53

Supplementary information:

11.8	TABLE: Heating test, resistance method					N/A
	Test voltage (V).....:					—
	Ambient, t1 (°C).....:					—
	Ambient, t2 (°C).....:					—
Temperature rise of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class

Supplementary information:

RF715N4AS1	Different main control unit
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11.8/11.102	TABLE: Heating test					P
	Test voltage (V).....:					254,4 V
	Ambient (°C)					42,1 / 42,8
Thermocouple locations:			Max. temperature rise measured, Δ T (K)		Max. temperature rise limit, Δ T (K)	
Supply cord			1,8		50-7=43	
Supply cord sheath			1,5		35-7=28	
Power PCB bracket / box			0,4		For clause 30.1	
Power PCB			2,1		120-7=113	
Terminals on PCB			1,7		For clause 30.1	

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Varistors	2,0	T85-25-7=53
X capacitors	0,8	50
Inductor bobbin / winding	2,1	65-7=58
Transformer bobbin / winding	15,8	85=7=78
Y capacitors	6,7	T85-25-7=53
Opto-coupler	9,1	T100-25-7=68
Relay (for compressor)	14,9	T70-25-7=38
Relay (for other loads)	6,9	T65-25-7=33
Solid state relay (IC2)	5,3	T85-25-7=53
Compressor housing	39,3	150 °C
Compressor discharge pipe	46,4	150 °C
Running cap for compressor	2,9	T70-25-7=38
Connectors	14 °C	For clause 30.1
Control panel	6,7	60-7=53
Control PCB	6,4	120-7-113
Plastic cover / control PCB bracket	9,1	For clause 30.1
LED cover	13,7 °C	For clause 30.1
LED PCB	14,5 °C	120-7-113
Cover board for fan / defrost heater (refrigerated compartment)	9,4 °C	For clause 30.1
Defrost heater surface (refrigerated compartment)	154,7	460°C - 100=360°C
Thermal link (refrigerated compartment)	0 °C	Ref.
Fan motor bobbin / winding (refrigerated compartment)	8,6 °C	65-7=58
Compartment plastic	17 °C	For clause 30.1
Pillar heater surface	16,1	460°C - 100=360°C
Enclosure of pillar heater	11,4	For clause 30.1
Defrost heater surface (freezing compartment)	127,6	460°C - 100=360°C
Thermal link (freezing compartment)	-12,8 °C	Ref.
Door switch	1,5	T65-25-7=33
Fan motor winding (freezing compartment)	-15,2 °C	65-7=58
Test corner	12,6	60-7=53
Supplementary information:		

11.8	TABLE: Heating test, resistance method		N/A
	Test voltage (V).....:		—

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	Ambient, t1 (°C).....:					—
	Ambient, t2 (°C).....:					—
Temperature rise of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	Max. Δ T (K)	Insulation class
Supplementary information:						
RF715N4AS1		Different main control unit				

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 V		—
Leakage current between:		I (mA)	Max. allowed I (mA)	
Live part and earthed metal		Max. 0,418	3,5	
Live part and accessible part		Max. 0,08 (peak)	0,35 (peak)	
Supplementary information:				

13.3	TABLE: Dielectric strength			P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)	
Live part and earthed metal		1000	No	
Live part and accessible part		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 V		—
	Three phase appliances 1.06 x rated voltage divided by $\sqrt{3}$ (V).....:	—		—

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Leakage current between:	I (mA)	Max. allowed I (mA)
Live part and earthed metal	0,458	3,5
Live part and accessible part	0,09	0,25
Supplementary information:		

16.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
Live part and earthed metal		1250	No
Live part and accessible part		3000	No
Supplementary information:			

17	TABLE: Overload protection		P
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Transformer for main control unit		55,5	150
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	Controlled automatically			
Are there “off” or “stand-by” position?			YES	Controlled automatically			
The unintended operation of the appliance results in dangerous malfunction?			NO	--			
Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result
19.2	N.A	N.A	N.A	N.A	N.A	N.A	N.A

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19.3	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19.4	Covered by 19.101	Covered by 19.101	N.A	N.A	N.A	N.A	P
19.5	Covered by 19.101	Covered by 19.101	N.A	N.A	N.A	N.A	P
19.6	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19.7	Supplied at rated voltage but with motor locked	Steady circumstance	N.A	N.A	N.A	N.A	P
19.8	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19.9	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19.10	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19.11.2	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19.11.4.8	N.A	N.A	N.A	N.A	N.A	N.A	N.A
19.101	Only heating elements operating	Steady circumstance or thermal link opened	N.A	N.A	N.A	N.A	P
19.104	Only LED lamp operating	Steady circumstance	N.A	N.A	N.A	N.A	P
Supplementary information:							

19.7	TABLE: Abnormal operation, locked rotor/moving parts					P
	Test voltage (V).....:		240			—
	Ambient, t1 (°C).....:		21,4 / 22,7 / 21,2 / 23,8 / 20,5			—
	Ambient, t2 (°C).....:		21,3 / 21,3 / 21,2 / 23,9 / 23,5			—
Temperature of winding:		R1 (Ω)	R2 (Ω)	Δ T (K)	T (°C)	Max. T (°C)
Supplementary information: See following table						

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)	Max. T (°C)
Supplementary information:						

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19.13/ 19.7-1	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Supply cord	1,5	150	
Opto-coupler	16,1	T100-25=75	
Valve winding 1	25,8	140	
Valve winding 2	100,5	140	
Test corner	0,6	150	
Supplementary information: Electric control valve			

19.13/ 19.7-2	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Supply cord	4,1	150	
Fan motor winding (refrigerated compartment)	12,2	125	
Opto-coupler	15,8	T100-25=75	
Test corner	4,9	150	
Supplementary information: Fan motor NIDEC			

19.13/ 19.7-3	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Supply cord	1,2	150	
Fan motor winding (freezing compartment)	8,8 °C	125	
Opto-coupler	14,5	T100-25=75	
Test corner	1,5	150	
Supplementary information: Fan motor Powerful			

19.13/ 19.7-4	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Supply cord	4,0	150	
Opto-coupler	14,7	T100-25=75	
Ice maker motor	14,3	125	

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Test corner	1,2	150
Supplementary information: Ice maker motor		

19.13/ 19.7-5	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord		4,9	150
Opto-coupler		13,5	T100-25=75
Fan motor winding (freezing compartment)		-10,4 °C	125
Test corner		0,6	150
Supplementary information: Fan motor Taixin			

19.13/ 19.101-1	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord		7,1	150
Opto-coupler		10,3	T100-25=75
Defrost heater surface (refrigerated compartment)		220,4	460°C - 100=360°C
Thermal link		24,5	Ref.
Test corner		0,4	150
Supplementary information: Anze			

19.13/ 19.101-2	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:		Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord		1,8	150
Opto-coupler		7,9	T100-25=75
Defrost heater surface (freezing compartment)		219,3	460°C - 100=360°C
Thermal link		25,2	Ref.
Test corner		1,1	150
Supplementary information: Anze			

19.13/ 19.101-3	TABLE: Abnormal operation, temperature rises		P
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Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord	0,3	150
Opto-coupler	0,1	T100-25=75
Pillar heater	55,1	460°C - 100=360°C
Test corner	0,2	150
Supplementary information: Anze		

19.13/ 19.101-4	TABLE: Abnormal operation, temperature rises	P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord	0,9	150
Opto-coupler	0,9	T100-25=75
Heater for water pipe	8,6	460°C - 100=360°C
Test corner	0,9	150
Supplementary information: Anze		

19.13/ 19.101-5	TABLE: Abnormal operation, temperature rises	P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord	10,2	150
Opto-coupler	8,3	T100-25=75
Defrost heater surface (refrigerated compartment)	238,7	460°C - 100=360°C
Thermal link	42,3	Ref.
Test corner	5,7	150
Supplementary information: Jian Long		

19.13/ 19.101-6	TABLE: Abnormal operation, temperature rises	P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)
Supply cord	1,0	150
Opto-coupler	1,2	T100-25=75
Pillar heater	61,1	460°C - 100=360°C
Test corner	1,9	150
Supplementary information: Jian Long		

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19.13/ 19.101-7	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Supply cord	0,5	150	
Opto-coupler	0,7	T100-25=75	
Heater for water pipe	9,2	460°C - 100=360°C	
Test corner	0,5	150	
Supplementary information: Jian Long			

19.13/ 19.104	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations:	Max. temperature rise measured, ΔT (K)	Max. temperature rise limit, ΔT (K)	
Supply cord	0,3	150	
Opto-coupler	2,1	T100-25=75	
LED cover	12,1	For clause 30.1	
Test corner	0,8	150	
Supplementary information:			

21.1	TABLE: Impact resistance			P
Impacts per surface	Surface tested	Impact energy (Nm)	Comments	
3	LED cover	0,5 J	P	
3	Compartment cover board	0,5 J	P	
3	Control panel	0,5 J	P	
3	Appliance enclosure	0,5 J	P	
3	Touchable glass panel	1,0 J	P	
Supplementary information:				

24.1	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Plug	Guangdong Huasheng Electrical Appliances Co., Ltd. "Wasung"	CT-104	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40006002	
(Alternative)	Guangdong Xiongrun Electrical Co., Ltd.	XR-322	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40006857	

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(Alternative)	Qingdao Riken Wire & Cable Co., Ltd.	LY-21	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40006669
(Alternative)	Changzhou Hong Chang Electronics Co., Ltd.	DTIII-2P-05	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40015536
(Alternative)	Kenic Electric Mfg. Co., Ltd.	KE-23	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40002191
(Alternative)	LINOYA ELECTRONIC TECHNOLOGY CO LTD	XYP-02L XYP-02	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40015292
(Alternative)	Shunde Lunjiao Kaite Wire & Cables Co., Ltd.	KE-201	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40017278
(Alternative)	Kai hua electric appliance Co., Ltd.	KH-9902	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40010410
(Alternative)	Shenzhen XieKang Electric Co., Ltd.	XK-02	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40017756
(Alternative)	Taizhou Xie Kang Electric Co., Ltd. /XinYuanPu	XYP-02	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40037029
(Alternative)	Zhejiang Yuehua Telecommunication Co., Ltd.	YP304	AC 250 V, 16 A	VDE 0620-1 IEC 60884-1: 2002 + A1 + A2	VDE 40007669
(Alternative)	Zhejiang Yuehua Telecommunication Co., Ltd.	YP304	AC 250 V, 16 A	NF C61-314 IEC 60884-1: 2002 + A1 + A2	LCIE N 676583
(Alternative)	Zhejiang Yuehua Telecommunication Co., Ltd.	YP304-1	AC 250V, 16 A	NF C 61-314 IEC 60884-1: 2002 + A1 + A2	LCIE N 677042
(Alternative)	Weihai Honglin Electronic Co., Ltd.	HL-014	AC 250V, 16 A	VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40020445
(Alternative)	Weihai Honglin Electronic Co., Ltd.	HL-013	AC 250V, 16 A	VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40021002
(Alternative)	Shenzhen Deren Electronic Co., Ltd.	DR-307	AC 250 V, 16 A	VDE 0620-2-1 IEC 60884-1: 2002 + A1 + A2	VDE 40008194
Plug for Italy	Guangdong Huasheng Electrical Appliances Co., Ltd."WASUNG"	CT-109	AC 250 V, 10 A	CEI 23-50-II IEC 60884-1: 2002 + A1 + A2	IMQ No. CA02.02637
(Alternative)	Taizhou Xie Kang Electric Co. Ltd. /XinYuanPu	XYP-04	AC 250 V, 10 A	CEI 23-50-II IEC 60884-1: 2002 + A1 + A2	IMQ CA02.05302
(Alternative)	Guangdong Huasheng Electrical Appliances Co., Ltd. "WASUNG"	CT-116	AC 250 V, 10 A	CEI 23-50-II IEC 60884-1: 2002 + A1 + A2	IMQ No.CA02.04372

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(Alternative)	Zhejiang Yuehua Telecommunication Co. LTD	YP314	AC250 V; 10 A	CEI 23-50-II IEC 60884-1: 2002 + A1 + A2	IMQ CA02.01723
(Alternative)	Changzhou Hong Chang Electronics Co. Ltd	DTIII-3P-01	AC 250 V; 10 A	CEI 23-50-II IEC 60884-1: 2002 + A1 + A2	IMQ CA02.03486
Plug for Switzerland	Guangdong Huasheng Electrical Appliances Co., Ltd.	CT-110	AC 250 V, 10 A	SEV 1011 IEC 60884-1: 2002 + A1 + A2	SEV No. 17.0002
(Alternative)	Lian Dung Electric Wire Material Co., Ltd.	LT-313	AC 250 V, 10 A	SEV 1011 IEC 60884-1: 2002 + A1 + A2	SEV No. 14.0585
(Alternative)	Wenzhou Yaohua Telecommunication Co. Ltd.	YP-305	AC 250 V, 10 A	SEV 1011 IEC 60884-1: 2002 + A1 + A2	SEV No. 18.0901
(Alternative)	Weihai Honglin Electronic Co., Ltd.	HL-070	AC 250V, 10A	SEV 1011 IEC 60884-1: 2002 + A1 + A2	SEV No. 17.0009
(Alternative)	Changzhou Hong Chang Electronics Co. Ltd	DTIII-3P-10	AC 250V, 10A	SEV 1011 IEC 60884-1: 2002 + A1 + A2	SEV No. 17.0914
BS plug	KDJ Quality Electrical Company Ltd.	KDJ828	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 54583
(Alternative)	Scolmore International Ltd	SW168, SW208, SW368 II, SW268, SW368	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 10807
(Alternative)	Bo Luo Cheng Le Metal Plastic Co., Ltd.	HO-100, HEC-168	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 60299
(Alternative)	Qingdao Riken Wire & Cable Co., Ltd.	LY-50	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 73119
(Alternative)	Guangdong Huasheng Electrical Appliances Co., Ltd. "Wasung"	CT-307	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	ASTA 885
(Alternative)	Guangdong Huasheng Electrical Appliances Co., Ltd. "Wasung"	CT-308	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	ASTA 961
(Alternative)	DongGuang YingTai Electric Co., Ltd.	CWL668	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 82901
(Alternative)	ShenZhen XieKang Company	XK-28	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	ASTA 972
(Alternative)	Taizhou Xie Kang Electric Co., Ltd. /XinYuanPu	XYP-106	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	ASTA 1236

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(Alternative)	Foshan Anden Industry Co., Ltd.	DL-203	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 69826
(Alternative)	Zhejiang Yuehua Telecommunication Co., Ltd. (Wenzhou Yaohua)	YP317	AC 250 V, 10 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 512007
(Alternative)	Changzhou Hong Chang Electronics Co., Ltd.	DTII-3P-22 DTII-3P-14 DTII-3P-09	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	BSI KM 69647
(Alternative)	Weihai Honglin Electronic Co Ltd.	HL-044	AC 250 V, 13 A	BS 1363-1 IEC 60884-1: 2002 + A1 + A2	KM 519268
Plug for South Africa	Foshan shunde Kai hua electric appliance Co., Ltd.	KH-9907	AC 250 V, 16 A	SANS 164-1 & 3 IEC 60884-1: 2002 + A1 + A2	SABS 8688/13707
(Alternative)	Shenzhen Xiejin Electronic Co., Ltd.	XK-22	AC 250 V, 16 A	IEC 60884-1: 2002 + A1 + A2	CB CN10937
(Alternative)	Guangdong Huasheng Electrical Appliances Co., Ltd. "Wasung"	CT-312	AC 250 V, 16 A	SANS 164-1 & 3 IEC 60884-1: 2002 + A1 + A2	SABS 9297/14752
(Alternative)	Taizhou Xie Kang Electric Co., Ltd. /XinYuanPu	XYP-109	AC 250 V, 6 A	IEC 60884-1: 2002 + A1 + A2	DE 2-018999
(Alternative)	Taizhou Xie Kang Electric Co., Ltd. /XinYuanPu	XYP-110	AC 250 V, 16 A	IEC 60884-1: 2002 + A1 + A2	DE 2-019000
(Alternative)	Shenzhen Xiejin Electronic Co., Ltd.	XK-23	AC 250 V, 6 A	IEC 60884-1: 2002 + A1 + A2	CB CN10938
(Alternative)	Qingdao Riken Wire & Cable Co., Ltd.	LY-60	AC 250 V, 16 A	IEC 60884-1: 2002 + A1 + A2	CB DE 2-016384
(Alternative)	Qingdao Riken Wire & Cable Co., Ltd.	LY-61	AC 250 V, 6 A	IEC 60884-1: 2002 + A1 + A2	CB DE 2-016383
(Alternative)	Changzhou Hong Chang Electronics Co. Ltd	DTII-3P-03	AC 250 V, 16 A	SANS 164-1/ SABS 164-1 IEC 60884-1: 2002 + A1 + A2	SABS 8207/13022
(Alternative)	Changzhou Hong Chang Electronics Co. Ltd	DTII-3P-02	AC 250 V, 6 A	SANS 164-1/ SABS 164-1 IEC 60884-1: 2002 + A1 + A2	SABS 8207/13022
Plug for Israel	Guangdong Huasheng Electrical Appliances Co., Ltd. "Wasung"	CT-801	AC 250 V, 16 A	32 Part 1.01 IEC 60884-1: 2002 + A1 + A2	Israel No. 43030
(Alternative)	Zhejiang Yuehua Telecommunication Co., Ltd.	YP324	AC 250 V, 16 A	32 Part 1.01 IEC 60884-1: 2002 + A1 + A2	Israel No. 40636
Supply Cord	Guangdong Huasheng Electrical Appliances Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40005362

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(Alternative)	Changzhou hongchang Electronics Co., Ltd	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 124978
(Alternative)	Chau's Electrical Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40022055
(Alternative)	Kenic Electric Mfg. Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 103853
(Alternative)	Zhejiang Xinya Electronic Co.,Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40000965
(Alternative)	Qingdao Riken Wire & Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 132193
(Alternative)	Shenzhen Xiekang Electric Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40029225
(Alternative)	Mainland Electric Wire & Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40010355
(Alternative)	Taizhou Xie Kang Electric Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40036119
(Alternative)	Hefei Deren Electronic Device Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40032365
(Alternative)	Wenzhou yaohua Telecommunication Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40025983
(Alternative)	Zhejiang Yuehua Telecommunication Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 130596
(Alternative)	Lian Dung Electric Wire Material Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 127334
(Alternative)	Suzhou Tongyuan Electric Wire & Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 128253
(Alternative)	Shenzhen Dongju Wire & Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 129988
(Alternative)	Weihai Honglin Electronic Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40022785
(Alternative)	Hangzhou Hongshi Electrical Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40010839

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(Alternative)	Zhejiang Xingda Electronics Wire & Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75mm ²	EN 50525-2-11: 2012 IEC 60227-5: 2011	VDE 40019127
Internal wire	Shanghai Sumin Wire Co., Ltd.	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E212872 Tested with appliance
(Alternative)	Guangdong Xiongrun Electrical Co., Ltd.	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E218728 Tested with appliance
(Alternative)	Tianjin Micro-well Electronics Co., Ltd.	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E301662 Tested with appliance
(Alternative)	Guangdong Huasheng Electrical Appliances Co., Ltd. "Wasung"	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E230918 Tested with appliance
(Alternative)	Zhongshan City Senbao Electric Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E199818 Tested with appliance
(Alternative)	Unirise Electric Wire & Cable Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E176095 Tested with appliance
(Alternative)	Yueqing City Gehong Wires & Cable Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E240917 Tested with appliance
(Alternative)	Xinya Electronic Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E170689 Tested with appliance
(Alternative)	Zhongshan Fuyuantong Wire & Cable Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E241989 Tested with appliance
(Alternative)	Zhongshan Dongfeng Zhoushishenlong Electronic Wire Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E257280 Tested with appliance
(Alternative)	Tition Electric Wire Group Co Ltd	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E216894 Tested with appliance

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(Alternative)	Chau'S Electrical Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E114082 Tested with appliance
(Alternative)	Herwell Electric Wire Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E301305 Tested with appliance
(Alternative)	Zhejiang Xinxin Electronic Wire Rod Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E225383 Tested with appliance
(Alternative)	LTK Wiring Co., Ltd	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E148000 Tested with appliance
(Alternative)	Qingdao Riken Wire & Cable Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E212103 Tested with appliance
(Alternative)	HongKong Xiekang Industrial Co., Ltd.	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	E315696 Tested with appliance
(Alternative)	Huataitong Electronics Wire & Cable (Qingdao) Co Ltd	1015 / 1007 / 2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E308242 Tested with appliance
(Alternative)	Lichang Connector Industry Co., Ltd.	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E228858 Tested with appliance
(Alternative)	ZHONGSHAN SHENGYUAN ELECTRICAL APPLIANCES CO LTD	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E314925 Tested with appliance
(Alternative)	Wenzhou Hu Tai Electric Wire & Cable Co Ltd	1015/1007/2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E238824 Tested with appliance
(Alternative)	Ningguo Huajie Electric & Material Factory	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E351674 Tested with appliance

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(Alternative)	Hefei Deren Electronic Device Co., Ltd.	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E338621&Tested with appliance
(Alternative)	Dae Young Wire (Tianjin) Co., Ltd.	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E318277 Tested with appliance
(Alternative)	Linoya Electronic Technology Co Ltd	1015/1007/2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E315619 Tested with appliance
(Alternative)	Taizhou Xiekang Electric Co., Ltd.	1015 / 1007	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E469342 Tested with appliance
(Alternative)	WEIHAI HONG LIN ELECTRONIC CO LTD	1015/1007/2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E239426 Tested with appliance
(Alternative)	Xingda Electronics Wire & Cable Co., Ltd.	1015/1007/2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E187208 Tested with appliance
(Alternative)	Changzhou HongChang Electronics Co., Ltd	1015/1007/2464	18 / 20 AWG	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E212395 Tested with appliance
(Alternative)	Wenzhou Hu Tai Electric Wire & Cable Co Ltd	60227 IEC 08	0.5 mm ² 0.75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2003010105099691
(Alternative)	Gehong Wires & Cable Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105016190
(Alternative)	Dalian LTK Electric Wire Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105006623
(Alternative)	Zhongshan City Senbao Electric Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105023131

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(Alternative)	Shanghai Sumin Wire Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105005 066
(Alternative)	Unirise Electronics Wire & Cable Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105017 271
(Alternative)	Guangdong Xiongrun Electricity Industry Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2003010105044 536
(Alternative)	Zhongshan Zhoushi Shenlong Wire Manufacture Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2005010105147 089
(Alternative)	Zhongshan Shenwan Fuyuantong Wire & Cable Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105016 607
(Alternative)	Zhongshan Dazheng Wiring Cable Manufacturing Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105021 400
(Alternative)	Foshan Shunde Ronggui Rongli Hengchang Electric Wire & Cable Factory	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105020 173
(Alternative)	Foshan Shunde Lunjiao Kaite Wire and Cables Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105023 791
(Alternative)	Xinya Electronic Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2004010105134 426
(Alternative)	Chengdu Bada Connector Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105004 285
(Alternative)	Linoya Electronic Technology Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105009 098

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(Alternative)	Zhejiang Xinxin Electronic Wire Rod Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105013 606
(Alternative)	Qingdao Riken Wire & Cable Co., Ltd. / Qing Dao Li Yan	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105013 152
(Alternative)	Zhejiang Xingda Wire & Cable Co., Ltd	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105012 462
(Alternative)	Wuhan Xingda Electronic Wire & Cable Co., Ltd.	60227IEC08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2004010105121 882
(Alternative)	Guangdong Huasheng Electrical Appliances Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2014010105735 651
(Alternative)	Hefei Deren Electronic Device Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2009010105338 593
(Alternative)	Tition Electric Wire Group Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105025 573
(Alternative)	Shanghai Dongju Wire & Cable Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105021 010
(Alternative)	HuaTaiTong Electronics Wire & Cable (Qingdao) Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2007010105222 643
(Alternative)	Foshan Shunde Lichang Industry Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2003010105088 502
(Alternative)	Huizhou LTK Electronic Cable Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2011010105513 735

IEC 60335-2-24

(Alternative)	LTK Electric Wire (Huizhou) Ltd.	60227 IEC 08	0,5/0,75mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC2004010105124312
(Alternative)	LTK Electric Wire (ChangZhou) Ltd.	60227 IEC 08	0,5/0,75mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC2014010105738242
(Alternative)	TaiZhou Xie Kang Electric Co.,Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2010010105393125
(Alternative)	Wenzhou Hutai Electric Wire & Cable Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2003010105099691
(Alternative)	Dae Young Wire (Tianjin) Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2009010105363614
(Alternative)	Changzhou City Xuexiang Telecommunication Copponent Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2002010105010114
(Alternative)	Jiangsu Hengtong electronic cable technology Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance& CCC 2004010105109614
(Alternative)	Changshu Honglin Wire and Cable Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2013010105637014
(Alternative)	Weihai Honglin Electronic Co., Ltd.	60227 IEC 08	0,5 / 0,75 mm ²	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance CCC 2004010105124195
Defrosting heating element (Freezing compartment)	Anhui Anze Electric Group Co., Ltd.	—	AC 220 – 240 V, 240 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Defrosting heating element (Refrigerated compartment)	Anhui Anze Electric Group Co., Ltd.	—	AC 220 – 240 V, 100 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance

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(Alternative)	Guangzhou Jianlong	—	AC 220 – 240 V, 100 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Thermal link for defrost heating elements	SCHOTT Japan Corporation	SF 70 E	AC 250 V, 10 A, 15 A, Tf: 73 °C	IEC 60691: 2016 EN 60691: 2017	VDE 40006568
(Alternative)	SCHOTT Japan Corporation	SF70R0	AC250 V, 10 A, 15 A, Tf: 73°C	IEC 60691: 2016 EN 60691: 2017	VDE 40035880
(Alternative)	Therm-O-Disc Europe B.V.	G4	AC 250 V, 10 A, Tf: 72 °C	IEC 60691: 2016 EN 60691: 2017	VDE 40017228
Pillar heater	Anhui Anze Electric Group Co., Ltd.	—	AC 220 – 240 V, 16 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
(Alternative)	Guangzhou Jianlong	—	AC 220 – 240 V, 16 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Water pipe heater just for RF702N4IS1, RT-70WC4S1	Anhui Anze Electric Group Co., Ltd.	—	12 VDC, 2 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
(Alternative)	Guangzhou Jianlong	—	12 VDC, 2 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Fan motor (Refrigerated compartment)	NIDEC	GW12E12MS1 DB-52	DC 12 V, 0,22 A	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Fan motor (Freezing compartment)	Shanghai Powerful Electric Co., Ltd.	ZWF-30-3	DC 12 V, 2,5 W	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
(Alternative)	Taixin Motor (Tianjin) Co., Ltd.	RFC41122	DC 10 V, 2,5 W	IEC 60335-2-24: 2010 + A1 IEC 60335-1: 2010 + A1 + A2 EN 60335-2-24: 2010 EN 60335-1: 2012 + A11	TUV R 50360834

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Ice maker motor for RF702N4IS1, RT-70WC4S1	NIDEC	NTGZ054Z01	DC 12 V, Max.200 mA	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Electric control valve for RF702N4IS1, RT-70WC4S1	Microfilter Co., Ltd.	WFR-2-2	220-240 V; 85 mA; 5E4; IPX7; Class E	IEC 60730-1: 2013 + A1 IEC 60730-2-8: 2000 + A1 EN 60730-1: 2016 EN 60730-2-8: 2002 + A1	TÜV SÜD B 15 07 61829 012
Door switch (Freezing compartment)	Zhejiang Changdecheng Electric Appliance Co., Ltd.	HC-050K.4	250 V, 2,5 A, 50E3, T85	IEC/EN 61058-1: 2008 IEC/EN 60079-15: 2010	VDE 40025046 CNEx16.2597X
(Alternative)	Zhongshan Jianyi Household Appliance Co., Ltd.	GN-0.5	250 V, 0,5 A, 50E3, T65	IEC/EN 61058-1: 2008 IEC/EN 60079-15: 2010	VDE 40025977 CNEx18.5165X
(Alternative)	Shenzhen Goodpal Electronics Co., Ltd.	P29	250V,2.5A, 50E3, T85	IEC/EN 61058-1: 2008 IEC/EN 60079-15: 2010	VDE 40015095 CNEx14.3155X
Water switch for RF702N4IS1, RT-70WC4S1	Zhejiang Changdecheng Electric Appliance Co., Ltd.	HLXW-16, HLXW-16.1, HLXW-16.2	250 VAC; 16 A; 10E3; T85; Glow wire resistance 850°C	IEC/EN 61058-1: 2008 IEC/EN 60079-15: 2010	VDE 40025118 CNEx15.3137X
Compressor	JIAXIPERA COMPRESSOR Co., Ltd.	NX1119Y	220-240 V, 50 Hz, R600a	IEC 60335-1: 2010 + A1 + A2 IEC 60335-2-34: 2012 + A1 EN 60335-1: 2012 + A11 EN 60335-2-34	VDE 40030008
Compressor capacitor	Shanghai Haoye Electric Co., Ltd.	MKP, CBB65	400/450 V; 4 µF; T85; S2	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40018780
Compressor capacitor (Alternative)	Ning Guo Yuhua Electrical Co. Ltd.	CBB65-A	400/450 V; 4 µF; T85; S2	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40026610
Compressor capacitor (Alternative)	Anhui Feida Electrical Technology Co., Ltd.	CBB65A-2	400/450 VAC; 4 µF; T85; S3	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40015353
Compressor capacitor (Alternative)	Shanghai Haoye Electric Co., Ltd.	MKP-1, CBB65D	400/450 V; 4 µF; T85; S3	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40023685

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Compressor capacitor (Alternative)	Shanghai Haoye Electric Co., Ltd.	MKPC/CBB65A	AC400/450 V; 4 µF; S2; 40/085/21	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40007405
Compressor capacitor (Alternative)	Ning Guo Yuhua Electrical Co. Ltd.	CBB65	400/450 VAC; 4 µF; T85; S3	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40024267
Compressor capacitor (Alternative)	Anhui Tongfeng Electronics Co., Ltd.	CBB65	400 V / 450 VAC; 4 µF; T70; S3	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40031113
Compressor capacitor (Alternative)	Anhui Tongfeng Electronics Co., Ltd.	CBB65	AC400 V/450 V, 4 µF, T85, S2	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40021308
Compressor capacitor (Alternative)	Anhui Juan Kuang Electric Co., Ltd.	MPP/CBB65	400 V / 450 VAC, 4 µF, S3; 40/85/21	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40024852
Compressor capacitor (Alternative)	Anhui Juan Kuang Electric Co., Ltd.	CBB65	400 V / 450 VAC, 4 µF, S2; 40/85/21	EN 60252-1 IEC 60252-1: 2010 + A1	VDE 40007679
PCB for main control unit	Kingboard Laminates Holdings Ltd	KB-5150, KB-5150A, KB-6160, KB-6160A KB-6150, KB-6150C KB-6160C, KB-5150&	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E123995 Tested with appliance
(Alternative)	International Laminate Material Ltd	ILM-R1##, GF11, DL-C3	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E134893 Tested with appliance
(Alternative)	Shengyi Technology Co Ltd	S1141, S1600, S3110, S1150G, S3116	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E109769 Tested with appliance
(Alternative)	WENZHOU YONGSHENG ELECTRIC TECHNOLOGY CO LTD	YP21F01C	V-0, 130°C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E248503 Tested with appliance
(Alternative)	HUIGENG ELECTRONIC INDUSTRIAL CO LTD	HG-003	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E325628 Tested with appliance
(Alternative)	DONGGUANSHI XINGLIAN ELECTRONIC CO LTD	XL01	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E346387 Tested with appliance

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(Alternative)	WINGLUNG(HUIZHOU)PCB CO LTD	WL202 WL203	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E301369 Tested with appliance
(Alternative)	CHANGZHOU SHUANGJIN ELECTRONIC CO LTD	CFR-4	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E190089 Tested with appliance
(Alternative)	JIANGSU DIFEIDA ELECTRONICS CO LTD	DFD-1 DFD-2	V-0, 130 °C, thickness: 1,6 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	UL E213009 Tested with appliance
X capacitor for main control unit	Xiamen Faratronic Co., Ltd.	MKP62	AC 275 V / 305 V, 0,1 µF, 0,22 µF, T110	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40000358
(Alternative)	Hsuan Tai Electrical Co., Ltd.	MCY	AC 275 V, 0,1 µF, 0,22 µF, T85	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 125205
(Alternative)	Tenta Electric Industrial Co., Ltd.	MEX	AC 275 V, 0,1 µF, 0,22 µF, T100	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 119119
(Alternative)	Shenzhen Surong Capacitors Co., Ltd.	MPX/MKP	AC 280 V / 310 V, 0,1 µF, 0,22 µF, T100	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40008924
(Alternative)	Shenzhen Jingyu Electronics Co., Ltd.	CBBX2	AC 275 V, 0,1 µF, 0,22 µF, T100	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40025597
(Alternative)	Dain Electronics Co., Ltd.	MEX, NPX, MPX	AC 275V or above, 0,1 µF, 0,22 µF, T100	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40018798
(Alternative)	Ultra Tech Xphi Enterprise Co., Ltd.	HQX	275 VAC, 0,1 µF, 0,22 µF	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40024534
(Alternative)	Carli Electronics Co., Ltd.	MPX	275 VAC, 0,1 µF, 0,22 µF	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40008520
(Alternative)	Nanjing Tengen Rongguangda Electronics (Group) Co., Ltd.	MKP	275 VAC, 0,1 µF, 0,22 µF	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40028680

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(Alternative)	Ningbo Jiangbei Zhenhua Electronic Co., Ltd.	CBB62	275 VAC; 0,1 μ F; 0,22 μ F , T100	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40006458
Y capacitor for main control unit	Xiamen Wanming Electronics Co., Ltd.	HM-Series	AC 250 V / 300 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40034436
(Alternative)	Guangdong South Hongming Electronic Science and Technology Co., Ltd.	F	AC 250 V / 300 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40036246
(Alternative)	TDK Corporation	CS	AC 250V / 300V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40017930
(Alternative)	TDK Corporation	CS	AC 250 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40029781
(Alternative)	VISHAY Electronic GmbH	VY2	AC 300 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40009669
(Alternative)	Walsin Technology Corp.	AC	AC 250 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40001829
(Alternative)	Success Electronics Co., Ltd.	SF	AC 250 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40037217
(Alternative)	Nanjing Yuyue Electronics Co., Ltd.	CT7	AC 250 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40008013
(Alternative)	Haohua Electronic Co.	CT7	AC 250 V, 4700 pF, T125	EN 60384-14: 2014 IEC 60384-14: 2013 + A1	VDE 40013601
Relay for compressor	Xiamen Hongfa Electroacoustic Co., Ltd.	JQX-14FF HF14FF	AC 250 V, 10 A, 5E4, T70	IEC/EN 61810-1: 2015	TÜV R 50140759
(Alternative)	Zettler Relay (Xiamen) Co., Ltd	AZ7618	AC 277 V, 16 A, 10E4, T105	IEC/EN 61810-1: 2015	TÜV R 50303572

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(Alternative)	OMRON Corporation Safety Standards Group	G5RL	AC 250 V, 12 A, T70 or above, 1E5	IEC/EN 61810-1: 2015	VDE 40007172
(Alternative)	OMRON Corporation Safety Standards Group	G2R	AC 250 V, 10 A / 16 A, 1E5, T70	IEC/EN 61810-1: 2015	VDE 40015012
(Alternative)	Xiamen Hongfa Electroacoustics Co., Ltd.	HF115F (JQX-115F)	250 VAC, 12 A /16 A, 10E4, T85	IEC/EN 61810-1: 2015	VDE 116934
(Alternative)	Tyco Electronics Austria GmbH	RZ	250 VAC, 12 A, 10E4, T85	IEC/EN 61810-1: 2015	VDE 40023970
(Alternative)	Tyco Electronics (Shenzhen)Co., Ltd.	OMI OMIH	240 VAC, 10 A / 16 A, 10E4, T85	IEC/EN 61810-1: 2015	VDE 40005414
(Alternative)	AMERICAN ZETTLER INC	AZ761	250 VAC, 12 A, 1E4, T70 or above	IEC/EN 61810-1: 2015	VDE 40006031
(Alternative)	Zhejiang Meishuo Electric Technology Co., Ltd.	MPJ-S-112-A-1	AC250 V, 10 A, T85; 1E5 cycles or above	IEC/EN 61810-1: 2015	TÜV R50294981
(Alternative)	Zhejiang Meishuo Electric Technology Co., Ltd.	MPJ-S-112-A-2	AC250 V, 16 A, T85, 1E5 cycles or above	IEC/EN 61810-1: 2015	TÜV R50294981
Relay for other loads	Xiamen Hongfa Electroacoustic Co., Ltd.	HF46F	AC 250 V; 3 A / 5 A / 7 A / 10 A; T85 or above, 5E4	IEC/EN 61810-1: 2015	VDE 40025215
(Alternative)	Zettler Relay (Xiamen) Co., Ltd	AZ9375	AC 250 V, 5 A, T90, 10E4	IEC/EN 61810-1: 2015	TÜV R 50284629
(Alternative)	OMRON Corporation Safety Standards Group	G5NB-1A, G5NB-1A-E	AC 250 V, 3 A / 5 A, T65 or above, 1E5 or above	IEC/EN 61810-1: 2015	VDE 137575
(Alternative)	Xiamen Hongfa Electroacoustic Co.,Ltd	JZC-32F, HF- 32F	AC 250 V, 5 A, T70, 1E5	IEC/EN 61810-1: 2015	VDE 40012204
(Alternative)	Tyco Electronics (Shenzhen) Co., Ltd.	PCJ	250 VAC, 3 A/5 A, 10E4, T85	IEC/EN 61810-1: 2015	VDE 40009151
(Alternative)	Zhejiang Meishuo Electric Technology Co., Ltd.	MPR-S-112-A	250 VAC; 5A; 10E4; T85	IEC/EN 61810-1: 2015	TÜV R50217035

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Fuse link on PCB for main control unit	Hollyland Company Limited	50CT	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40014896
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd.	5H	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40037020
(Alternative)	Dongguan Better Electronic Technology Co., Ltd.	524	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40025424
(Alternative)	XC Electronics (Shen Zhen) Corp., Ltd.	5T series	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40009610
(Alternative)	Hollyland Company Limited	50T	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40014460
(Alternative)	Dongguan Better Electronic Technology Co., Ltd.	522	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40019022
(Alternative)	Hollyland Company Limited	5ET	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40015669
(Alternative)	Dongguan Better Electronic Technology Co., Ltd.	932	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40033369
(Alternative)	Littelfuse, Inc.	392	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 126983

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(Alternative)	Littelfuse, Inc.	382	AC 250 V, 3,15 A	IEC 60127-1: 2006 + A1 + A2 IEC 60127-3: 2015 EN 60127-1: 2015 EN 60127-3: 2015	VDE 40018249
Transformer for main control unit	Qingdao Jingshi Electronic CO., LTD.	BCK-25-2269	INPUT: AC 85 V~265 V, OUTPUT: 12 W, Class B	IEC 61558-1: 2017 IEC 61558-2-16: 2009 + A1 EN 61558-1: 2005 + A1 EN 61558-2-16: 2009 + A1	CQC 08001023629
Varistor for main control unit (510 V just for RF702N4IS1, RT-70WC4S1)	Fenghua Adv. Tech. (Holding) Co., Ltd.	FNR-10K511, FNR-14K561	510 V, 560 V; T85	IEC 61051: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 EN 61051: 2009	VDE 40008242
(Alternative)	Chengdu Tieda Electronic Co., Ltd.	MYN12-511, MYN15-561	510 V, 560 V; T85	IEC 61051: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 EN 61051: 2009	VDE 40008571
(Alternative)	Shaanxi Huaxing Varistor Factory	MYG20G10K5 11, MYG20G14K5 61	510 V, 560 V; T85	IEC 61051: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 EN 61051: 2009	VDE 40018747
(Alternative)	Thinking Electronic Industrial Co., Ltd.	TVR10511, TVR14561	510 V, 560 V; T85	IEC 61051: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 EN 61051: 2009	VDE 005944
(Alternative)	Joyin Co., Ltd	10N511K, 14N561K	510 V, 560 V; T85	IEC 61051: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 EN 61051: 2009	VDE 005937
(Alternative)	Brightking Inc.	511KD10, 561KD14	510 V, 560 V; T85	IEC 61051: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 EN 61051: 2009	VDE 40022070

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(Alternative)	EPCOS OHG	S14*	510 V, 560 V, T85	IEC 61051: 2007 IEC 61051-2: 1991 + A1 IEC 61051-2-2: 1991 EN 61051: 2009	VDE 40027582
Optocoupler for main control unit	Toshiba Corporation Semiconductor & Storage Products Company	TLP781	Insulation voltage: 890 V, Transient overvoltage: 6000 V, T115	IEC 60747-5-5: 2007 + A1 EN 60747-5-5: 2015	VDE 40021173
(Alternative)	Sharp Corporation Electronic Components and Devices Group	PC817	Insulation voltage: 890 V, Transient overvoltage: 9000 V, T110	IEC 60747-5-5: 2007 + A1 EN 60747-5-5: 2015	VDE 40008087
(Alternative)	Lite-On Technology Corporation	LTV-817	Insulation voltage: 850 V, Transient overvoltage: 6000 V, T115	IEC 60747-5-5: 2007 + A1 EN 60747-5-5: 2015	VDE 40015248
(Alternative)	Everlight Electronics Co., Ltd	EL817 V	Insulation voltage: 850 V, Transient overvoltage: 6000 V, T100	IEC 60747-5-5: 2007 + A1 EN 60747-5-5: 2015	VDE 132249
(Alternative)	Toshiba Corporation Semiconductor & Storage Products Company	TLP785	Insulation voltage UIORM: 890 V, Transient overvoltage: 6000 V, T115	IEC 60747-5-5: 2007 + A1 EN 60747-5-5: 2015	VDE 40031808
Solid State Relay for main control unit	Panasonic Corporation	AQH2223	Output AC 250 V eff.; 600 V peak.; T85	EN 60950-1: 2014 IEC 60950-1: 2005 + A1 + A2	VDE 40004928
Alternative	Sharp Corporation Electronic	R39MF5	Insulation voltage (peak voltage): 890 V, Transient overvoltage (peak voltage): 7100 V; T100	IEC 60747-5-5: 2007 + A1 EN 60747-5-5: 2015	VDE 40008898
Alternative	Everlight Electronics Co., Ltd.	ELR2223	Repetitive peak isolation voltage: 1060 V, Transient isolation voltage: 8000 V	IEC 60747-5-5: 2007 + A1 EN 60747-5-5: 2015	VDE 40028391

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Non-metallic material for external rear surface of refrigerator	Hangzhou Baolan plastic products Co. Ltd.	---	PP, thickness: 2,0 mm & 2,5 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Alternative	Wenzhou Tianrui new material technology Co., Ltd.	---	PP, thickness: 2,0 mm & 2,5 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Alternative	Zhongshan Ruihong Electronic Co., Ltd.	---	PP, thickness: 2,0 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance
Alternative	QINGDAO FENGXIYUAN PLASTIC CO., LTD.	---	PP, thickness: 2,5 mm	IEC 60335-2-24 IEC 60335-1 EN 60335-2-24 EN 60335-1	Tested with appliance

Supplementary information:

¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

28.1	TABLE: Threaded part torque test			P
Threaded part identification:		Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Earthed screw		3,9	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***	B, B1	S, S1	—	F1 F2	P
4 000	3,0(for R3) / 3,5***	—	—	R, R1, R2, R3	—	P
6 000	5,5 / 6,0***	—	—	—	—	N/A
8 000	8,0 / 8,5***	—	—	—	—	N/A

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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 B: B/W live parts and earthed metal: 15,3 mm S: B/W internal wire and accessible surface inside: 14,1 mm R: B/W live parts and inside accessible surface: 11,7 mm F1: B/W L and N on power PCB (series 1): 3,2 mm F2: B/W L and N on power PCB (series 2): 3,2 mm B1: B/W two pins of Y cap C6 / C004: 4,1 mm S1: B/W two pins of Y cap C7 / C005: 4,1 mm R1: B/W primary circuit and secondary circuit on power PCB (series 1): 5,5 mm R2: B/W primary circuit and secondary circuit on power PCB (series 2): 4,9 mm R3: B/W primary circuit and secondary circuit in relays (series 1/2): 5,0 mm						

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V):	Creepage distance (mm) Pollution degree							Type of insulation			
	1	2			3						
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	B**	S**	R**	Verdict
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—	—	—	N/A
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—	—	—	N/A
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—	—	N/A
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	B, B1	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0 (for S)	—	S, S1	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0 (for R)	—	—	R, R1, R2, R3	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

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500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A

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>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

Supplementary information:

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

**) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation

B: B/W live parts and earthed metal: 15,3 mm

S: B/W internal wire and accessible surface inside: 14,1 mm

R: B/W live parts and inside accessible surface: 11,7 mm

B1: B/W two pins of Y cap C6 / C004: 4,1 mm

S1: B/W two pins of Y cap C7 / C005: 4,1 mm

R1: B/W primary circuit and secondary circuit on power PCB (series 1): 8,1 mm

R2: B/W primary circuit and secondary circuit on power PCB (series 2): 8,1 mm

R3: B/W primary circuit and secondary circuit in relays (series 1/2): 5,0 mm

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V):	Creepage distance (mm) Pollution degree							
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb*	Verdict / Remark
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	N/A
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	N/A
250	0,42	1,0	1,4	2,0	2,5	2,8	3,2	P(F1/F2)
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

IEC 60335-2-24

>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

F1: B/W L and N on power PCB (series 1): 3,2 mm

F2: B/W L and N on power PCB (series 2): 3,2 mm

30.1	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm) :		2,0 mm		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Power PCB bracket / box	—	75	0,84	
Terminals on PCB	—	125	0,85	
Inductor bobbin	—	125	0,56	
Transformer bobbin	Qingdao Jingshi Electronic Co., Ltd.	125	0,52	
Electric control valve bobbin	Microfilter Co., Ltd.	125	0,84	
Connectors	—	125	0,75	
Control panel	—	75	1,25	
Plastic cover / control PCB bracket	—	75	1,03	
LED cover	—	65	0,48	
Cover board for fan / defrost heater	—	65	0,63	
Fan motor bobbins	NIDEC	75	0,41	
Compartment plastic	—	65	0,61	
Enclosure of pillar heater	—	65	0,65	
Ice maker motor	NIDEC	65	0,57	
Supplementary information: Only the unfavourable result for this component was displayed.				

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		

IEC 60335-2-24

Power PCB bracket / box	—	x						P
Terminals on PCB	—				0 s	0 s	x	P
Inductor bobbin	—				0 s	0 s	x	P
Transformer bobbin	Qingdao Jingshi Electronic Co., Ltd.				0 s	0 s	x	P
Electric control valve bobbin	Microfilter Co., Ltd.		0 s	0 s				P
Connectors	—				0 s	0 s	x	P
Control panel	—	x						P
Plastic cover / control PCB bracket	—	x						P
LED cover	—	x						P
Cover board for fan / defrost heater	—	x						P
Fan motor bobbins	NIDEC	x						P
Compartment plastic	—	x						P
Enclosure of pillar heater	—	x						P
Ice maker motor	NIDEC	x						P
X caps	Xiamen Faratronic Co., Ltd.		0 s	0 s				P
Relay for compressor	Zettler Relay (Xiamen) Co., Ltd				0 s	0 s	x	P
Relay for other loads	Xiamen Hongfa Electroacoustic Co., Ltd.				0 s	0 s	x	P
Running capacitor for compressor	Shanghai Haoye Electric Co., Ltd.				0 s	0 s	x	P
Running capacitor for valve	—				2,8 s	1,1 s	x	P
Door switch	Zhejiang Changdecheng Electric Appliance Co., Ltd.				0 s	0 s	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	
—	—	—	—	—	—	—	—	—
The test specimen passed the glow-wire test (GWT) with no ignition [(te – ti) ≤ 2s] (Yes/No)....:								Yes

IEC 60335-2-24

If no, then surrounding parts passed the needle-flame test of Annex E (Yes/No).....:	No
The test specimen passed the test by virtue of most of the flaming material being withdrawn with the glow-wire (Yes/No)?..... :	No
Ignition of the specified layer placed underneath the test specimen (Yes/No)..... :	No
Supplementary information: Only the unfavourable result for this component was displayed. 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
PCB *	Kingboard Laminates Holdings Ltd	30	No	0	P
Non-metallic material for external rear surface of refrigerator *	QINGDAO FENGXIYUAN PLASTIC CO., LTD	30	No	4,7	P
Supplementary information: *Only the unfavourable result for this component was displayed. - 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					

AA	TABLE: Locked-rotor test of fan motors, windings temperature limit measurements					P
	Test voltage (V).....:	DC12 V				—
	Ambient, T ₁ (°C).....:	23,6				—
	Ambient, T ₂ (°C).....:	24,4				—
Temperature limit T of winding:		R ₁ (Ω)	R ₂ (Ω)	□T (K)	T (°C)	Max. T (°C)
Motor winding (NIDEC)		—	—	13,9	38,9	150
Motor winding (Powerful)		—	—	11,5	36,5	150
Motor winding (Taixin)		—	—	9,7	34,7	150

	TABLE: Electric strength measurements		P
Test voltage applied between:	Test voltage (V)	Breakdown Yes / No	
Windings and the body	500	No	

IEC 60335-2-24

	TABLE: Leakage current measurements		P
	A voltage equal to twice the rated voltage (V).....:	24	—
Leakage current I between :		I (mA)	Required I (mA)
Windings and the body		0,08	2

--- End of report ---

Attachment 1: Photo documentation

Report No.: GZES180300345302A1 Page 1 of 23

Type of equipment, **Frost Free Refrigerator Freezer; RF702N4IS1, RT-70WC4S1,**
model: **RF715N4AS1, RT-72WC4S1**

Details of: RF702N4IS1, RT-70WC4S1

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: RF702N4IS1, RT-70WC4S1; Water dispenser

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: RF702N4IS1, RT-70WC4S1

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom

Details of: RF702N4IS1, RT-70WC4S1

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom

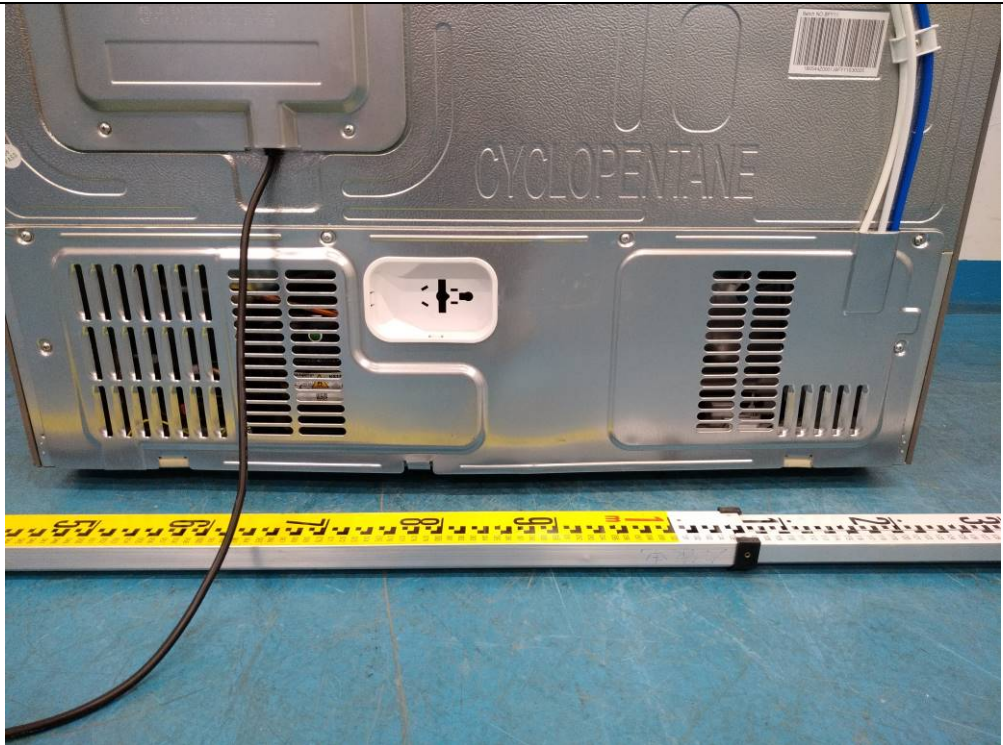
Attachment 1: Photo documentation

Report No.: GZES180300345302A1 Page 3 of 23

Details of: RF702N4IS1, RT-70WC4S1

View:

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



Details of: RF702N4IS1, RT-70WC4S1; Water pipe connected to water supply

View:

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



Attachment 1: Photo documentation

Report No.: GZES180300345302A1 Page 4 of 23

Details of: RF702N4IS1, RT-70WC4S1; Power PCB / main control unit cover

View:

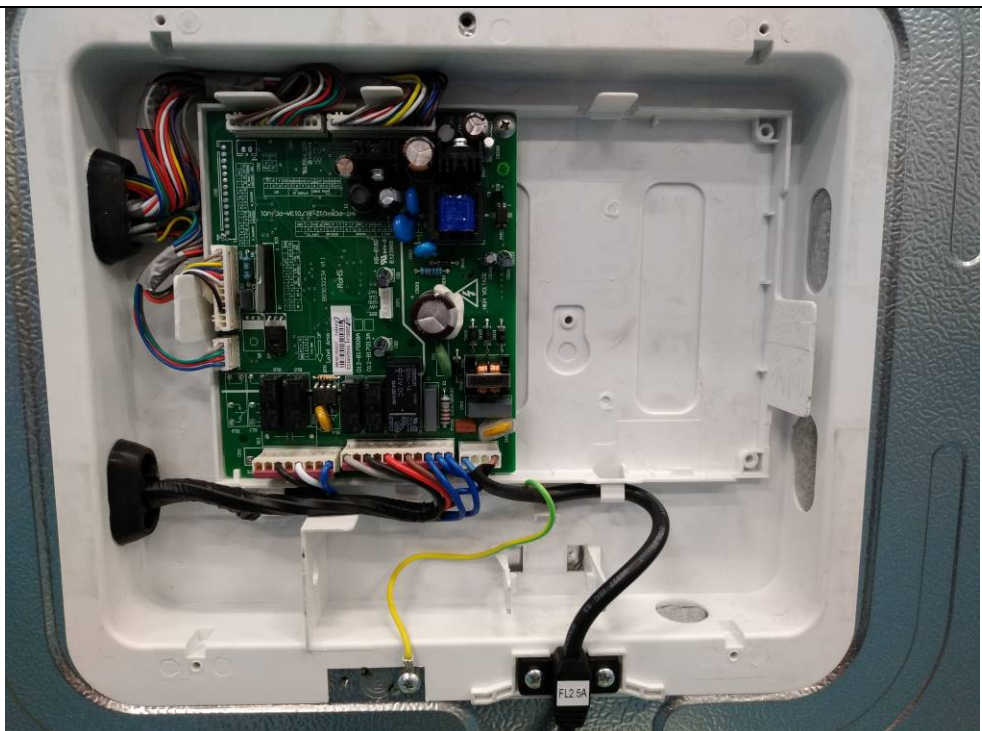
- ☐ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



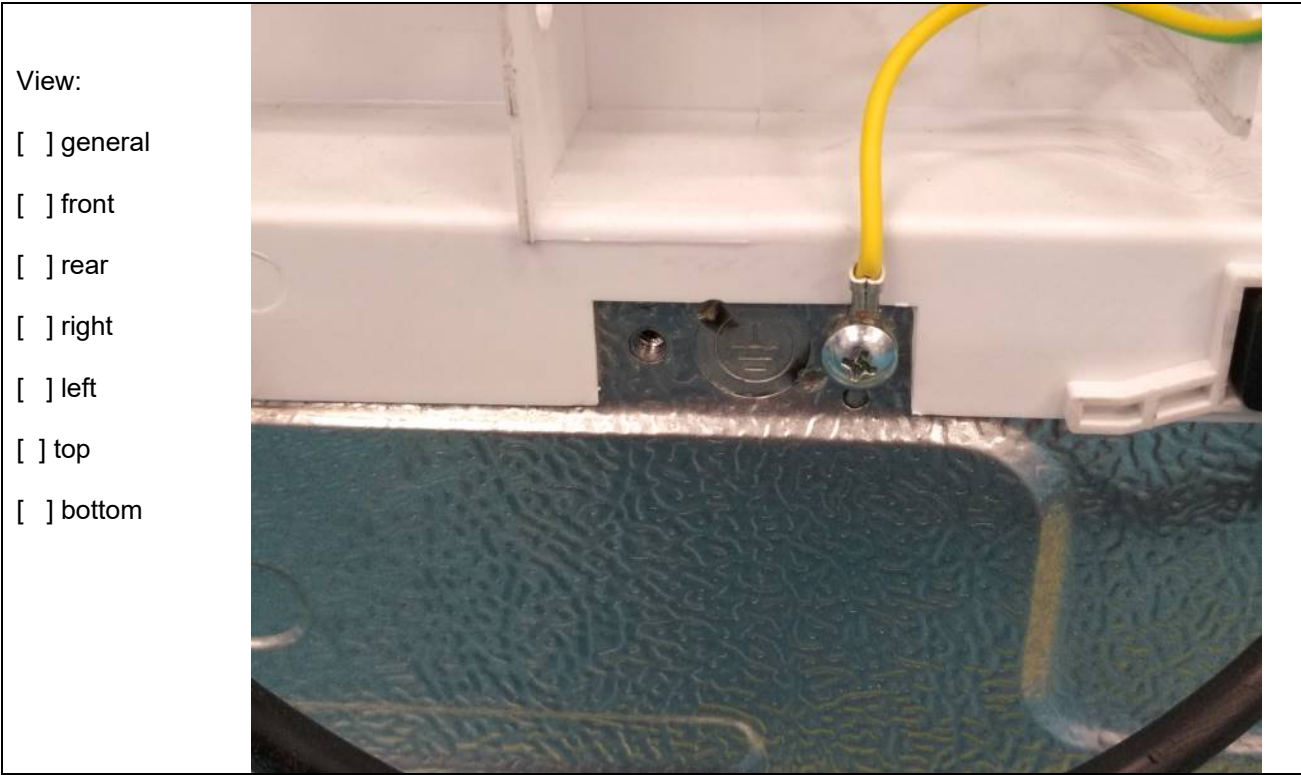
Details of: RF702N4IS1, RT-70WC4S1; Power PCB

View:

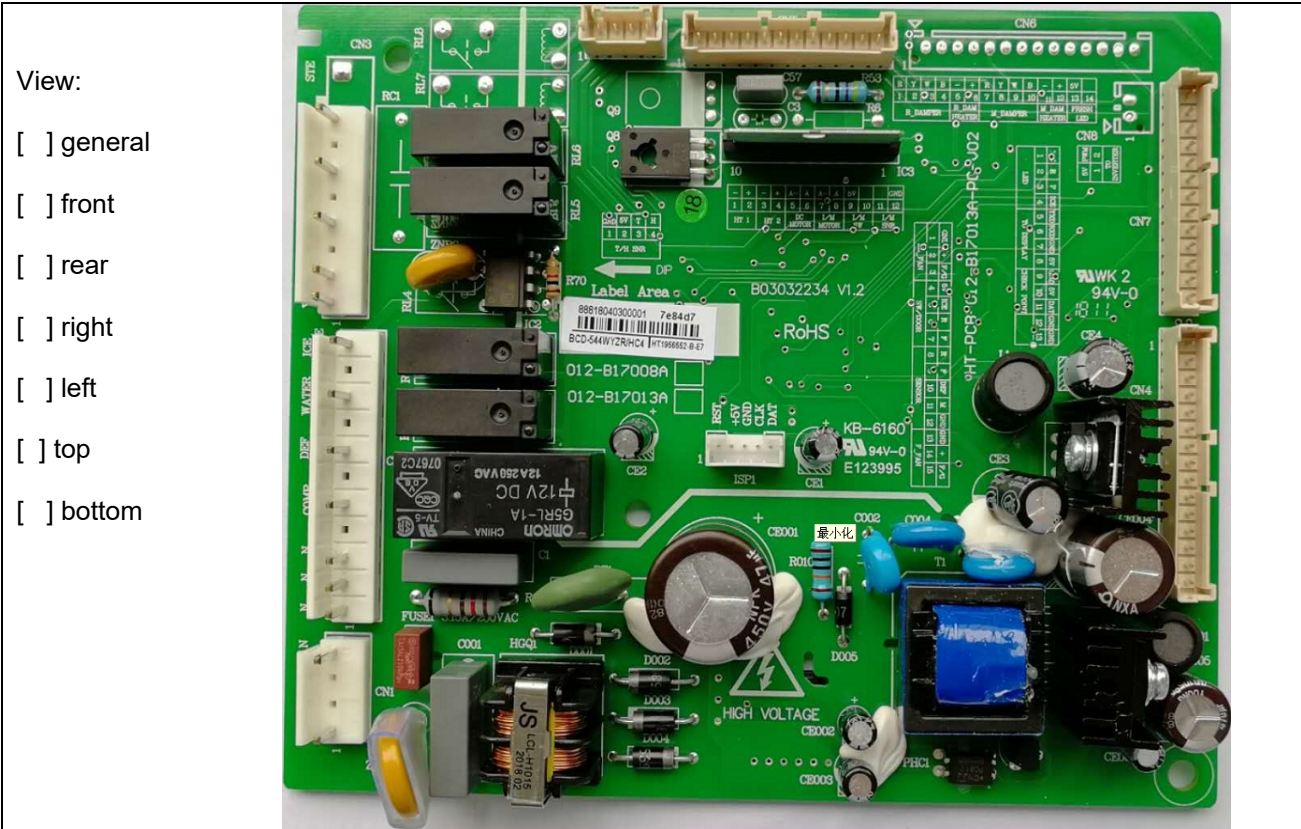
- ☐ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☐ bottom



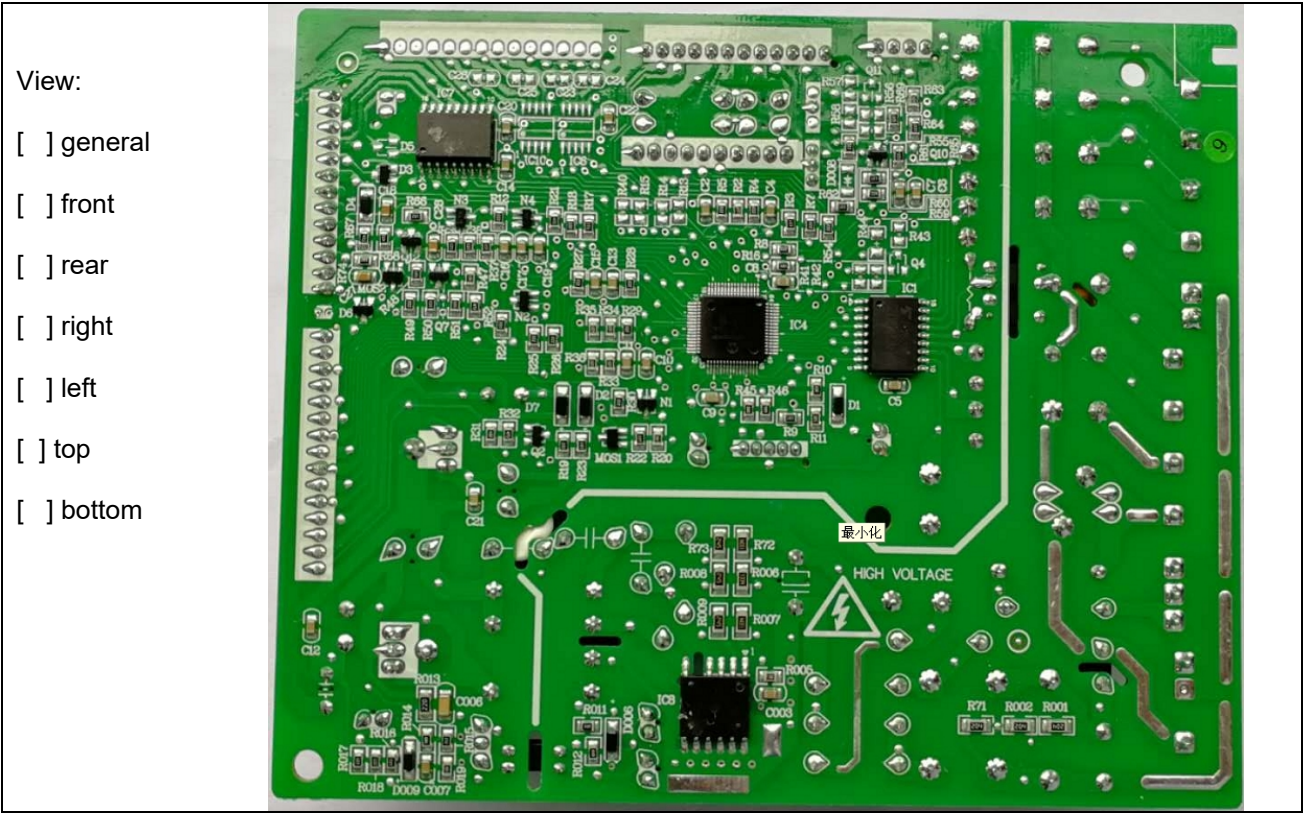
Details of: Earthed terminal



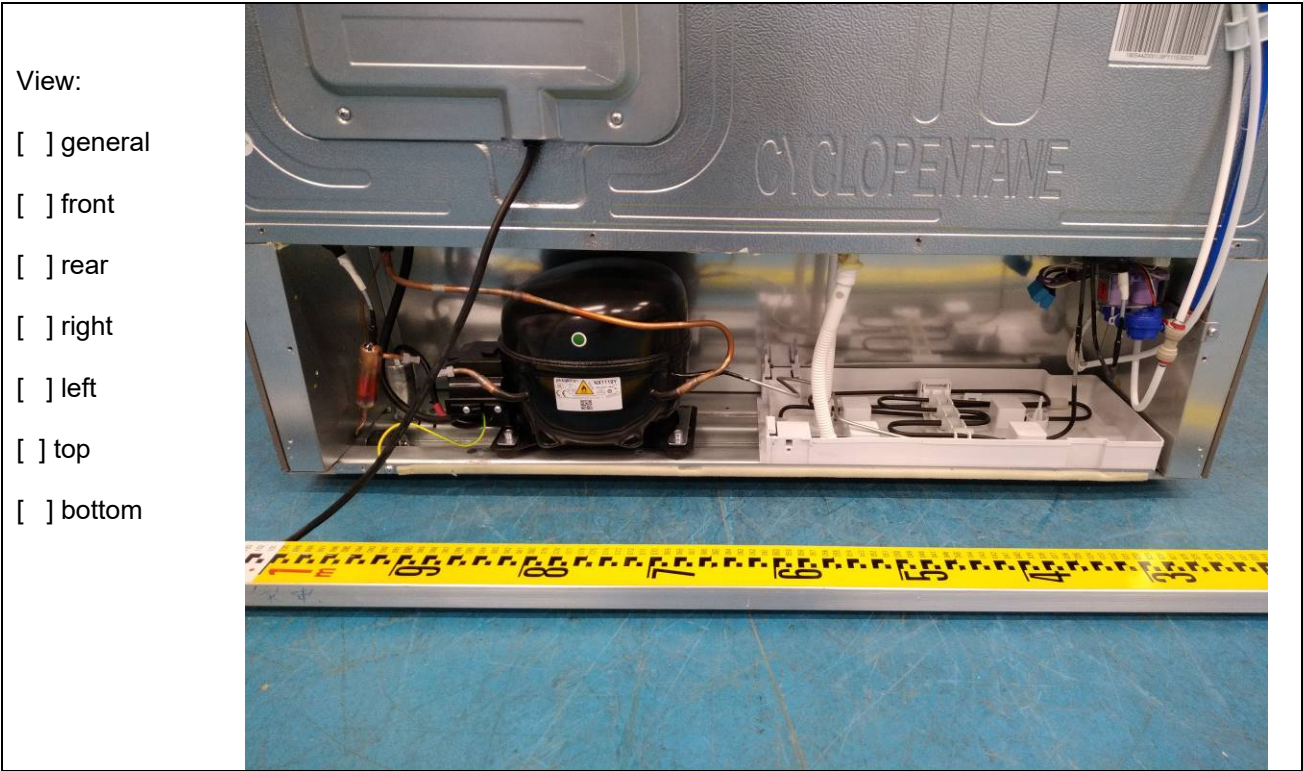
Details of: Power PCB for models RF702N4IS1, RT-70WC4S1



Details of: Power PCB for models RF702N4IS1, RT-70WC4S1



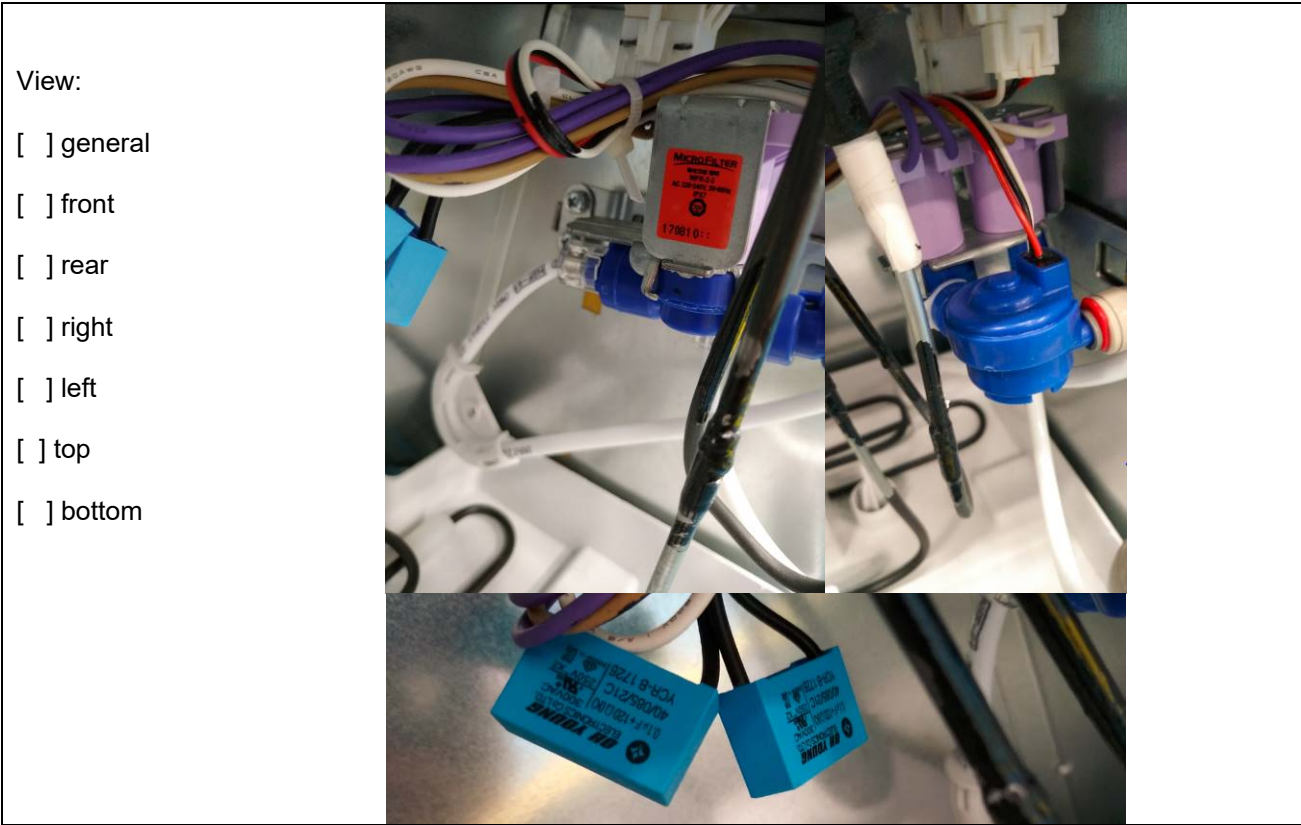
Details of: RF702N4IS1, RT-70WC4S1



Details of: Compressor and running capacitor



Details of: Electric control valve and water switch



Details of: RF702N4IS1, RT-70WC4S1; Door opened



Details of: RF702N4IS1, RT-70WC4S1; Control panel



Attachment 1: Photo documentation

Report No.: GZES180300345302A1 Page 9 of 23

Details of: RF702N4IS1, RT-70WC4S1

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: RF702N4IS1, RT-70WC4S1

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: RF702N4IS1, RT-70WC4S1; Control PCB



Details of: Pillar heater



Details of: LED PCB



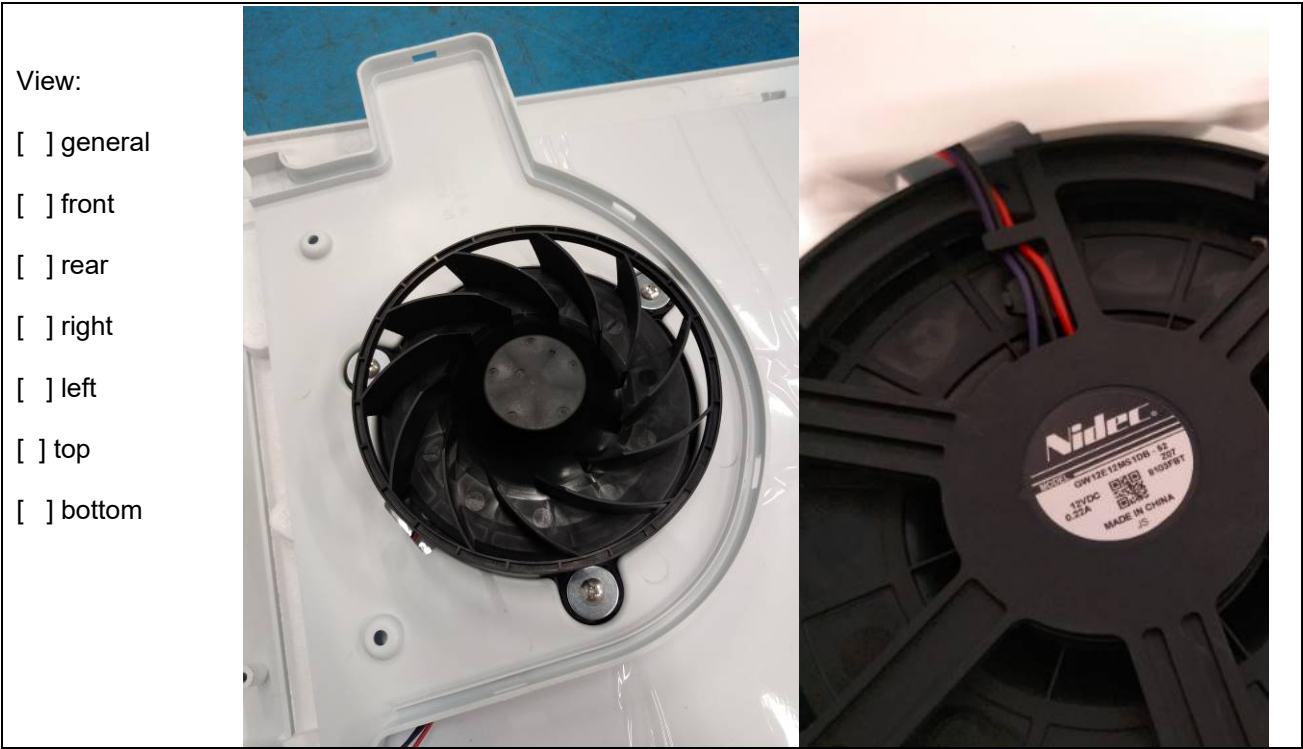
Details of: Defrost heater and fan motor in refrigerated storage



Details of: Thermal link for heater (each for a pole)



Details of: Fan motor



Details of: Fan motor for alternative



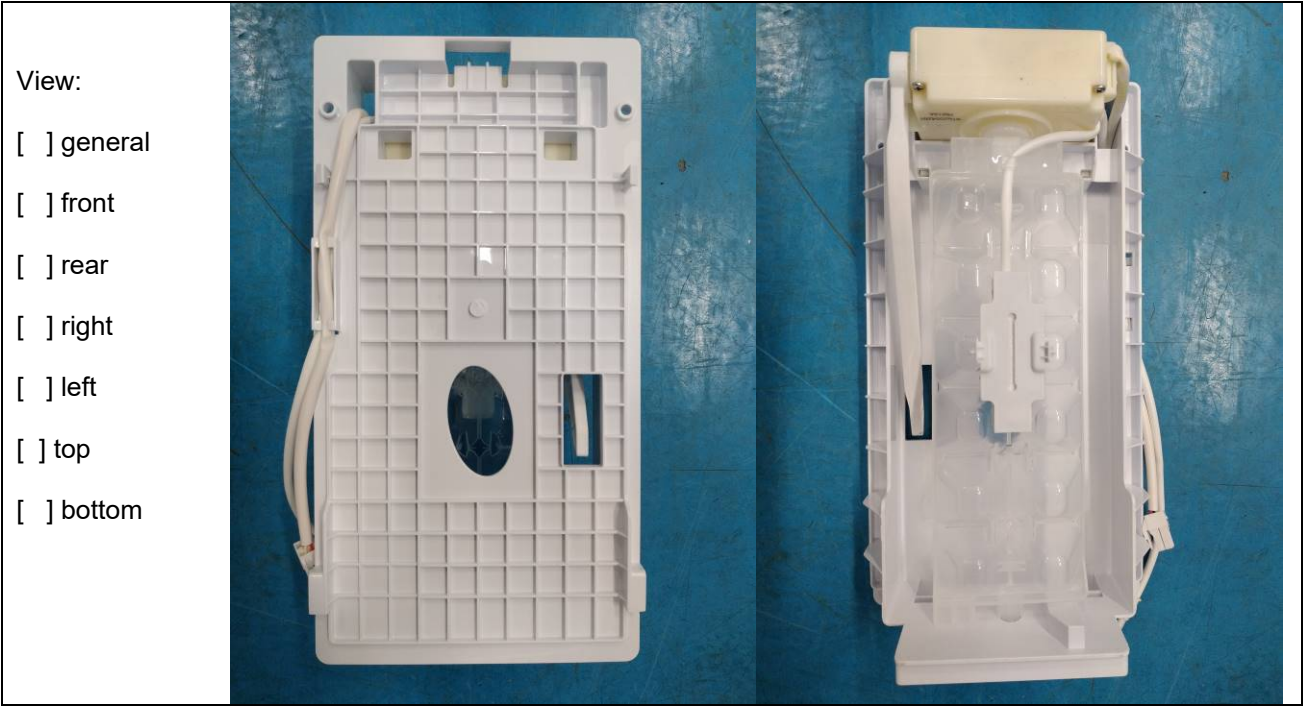
Details of: RF702N4IS1, RT-70WC4S1; Water pipe heater inside



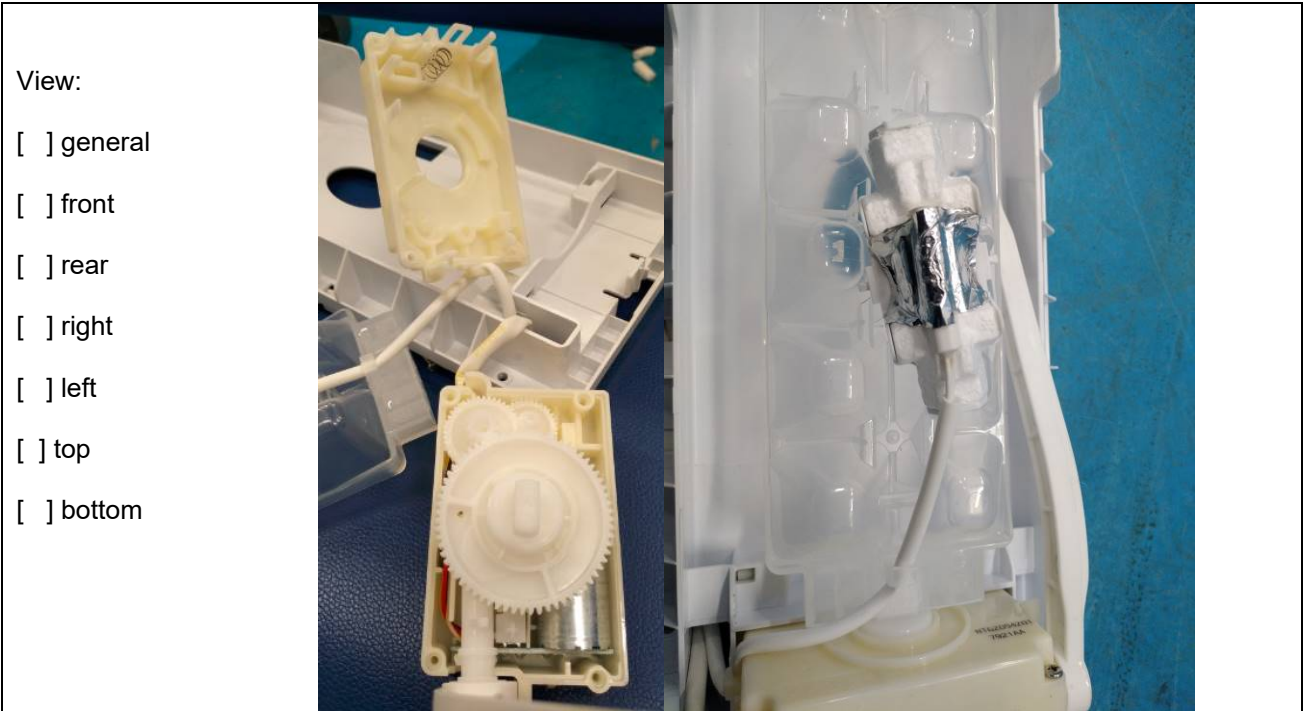
Details of: Door switch



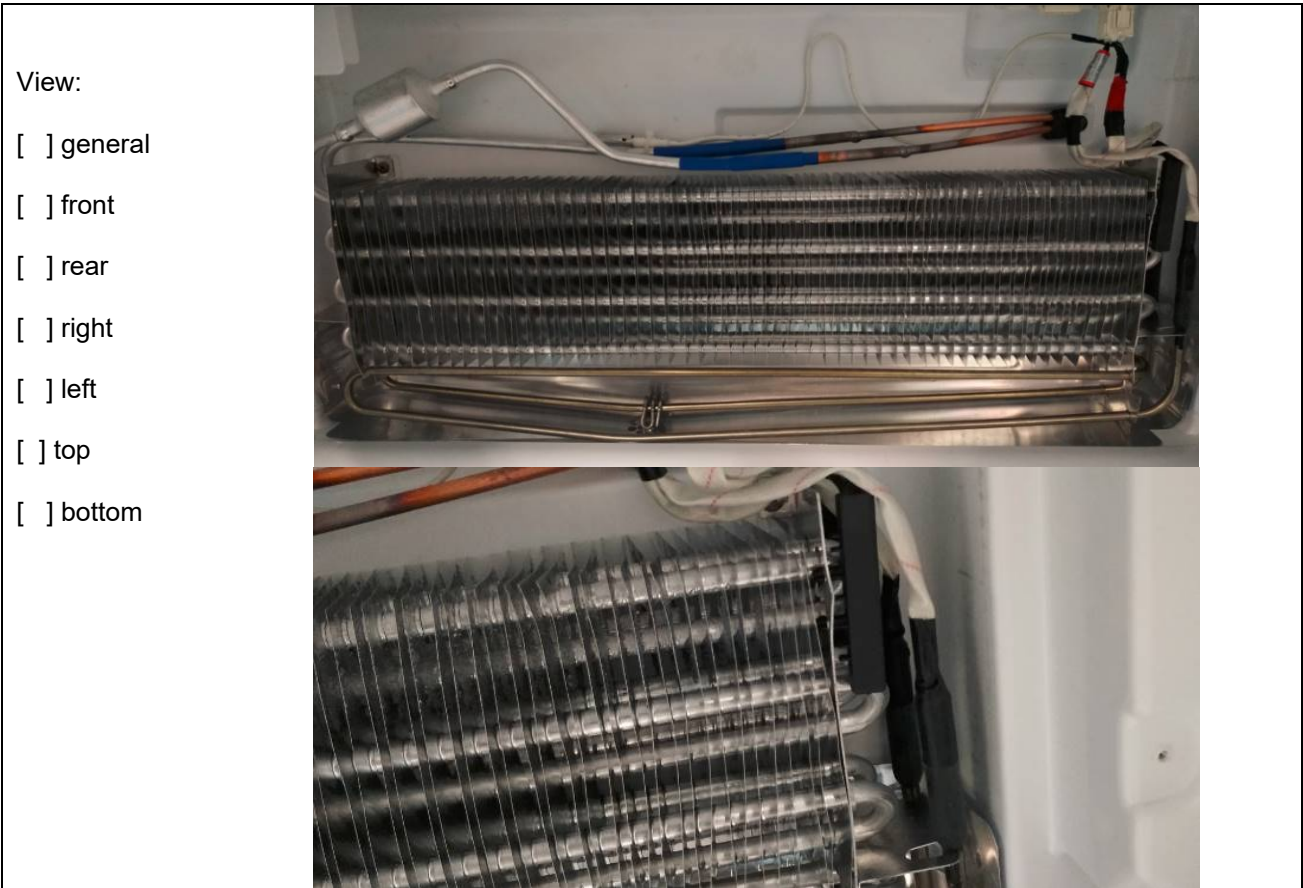
Details of: RF702N4IS1, RT-70WC4S1; Ice maker motor



Details of: RF702N4IS1, RT-70WC4S1; Ice maker motor



Details of: Defrost heater in freezing storage



Details of: RF715N4AS1, RT-72WC4S1



Details of: RF715N4AS1, RT-72WC4S1; Door opened



Details of: RF715N4AS1, RT-72WC4S1; Control panel

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: RF715N4AS1, RT-72WC4S1

View:

☐ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Attachment 1: Photo documentation

Report No.: GZES180300345302A1 Page 18 of 23

Details of: RF715N4AS1, RT-72WC4S1

View:

☐ general

☐ front

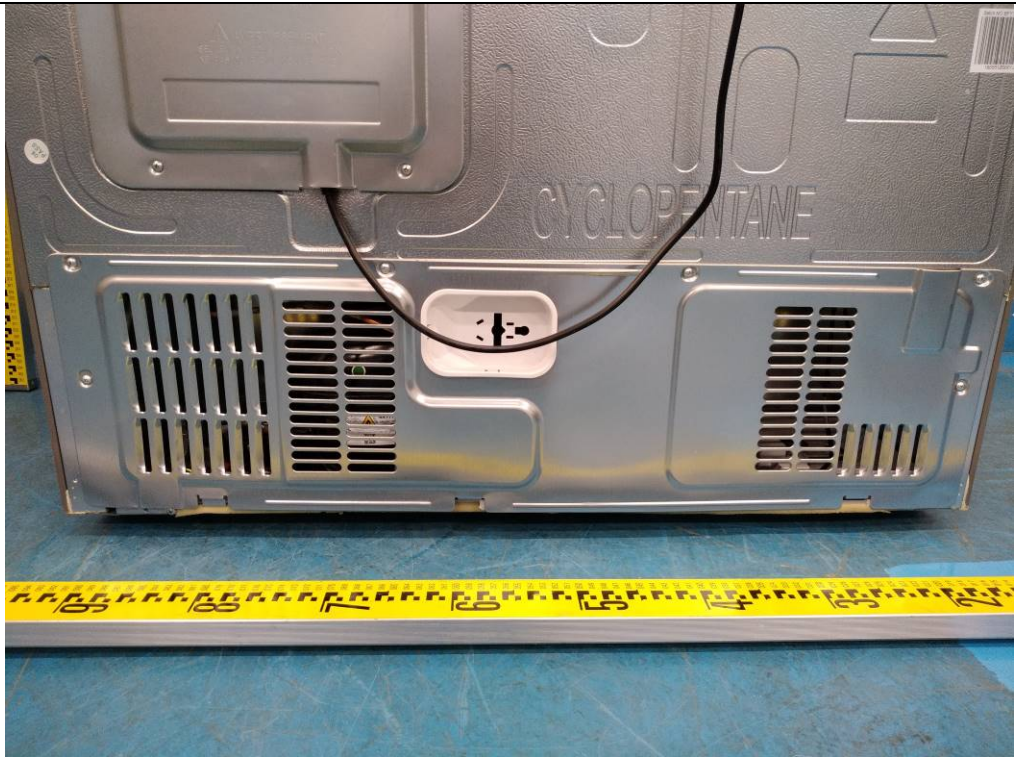
☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: RF715N4AS1, RT-72WC4S1; Power PCB / main control unit

View:

☐ general

☐ front

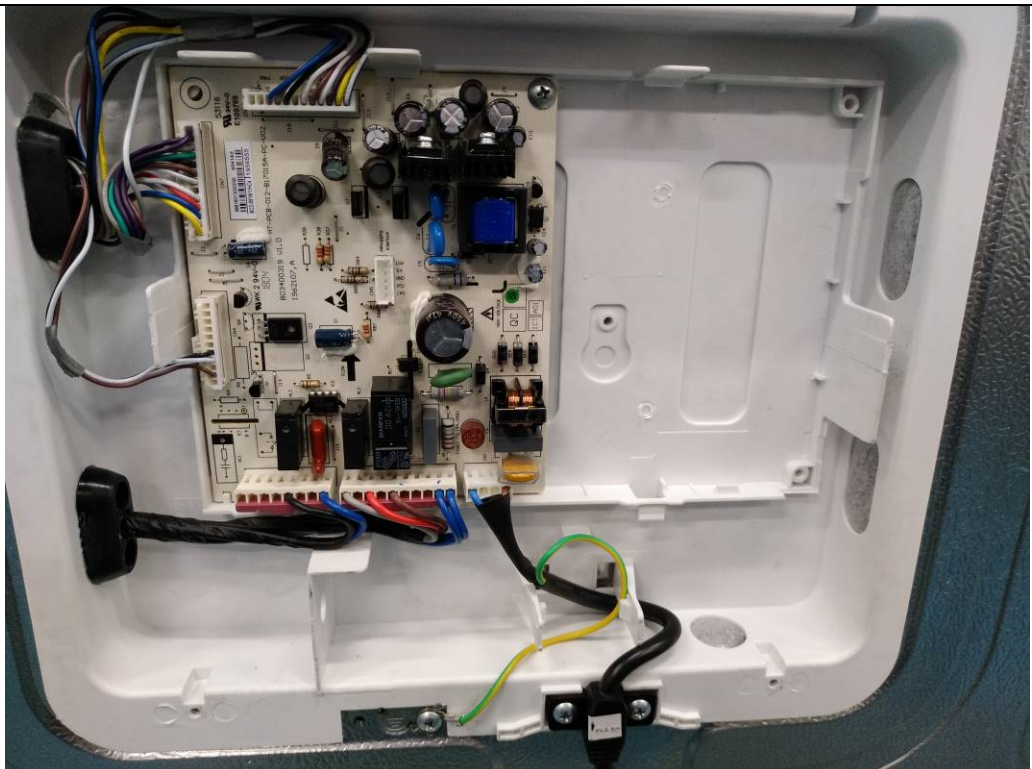
☐ rear

☐ right

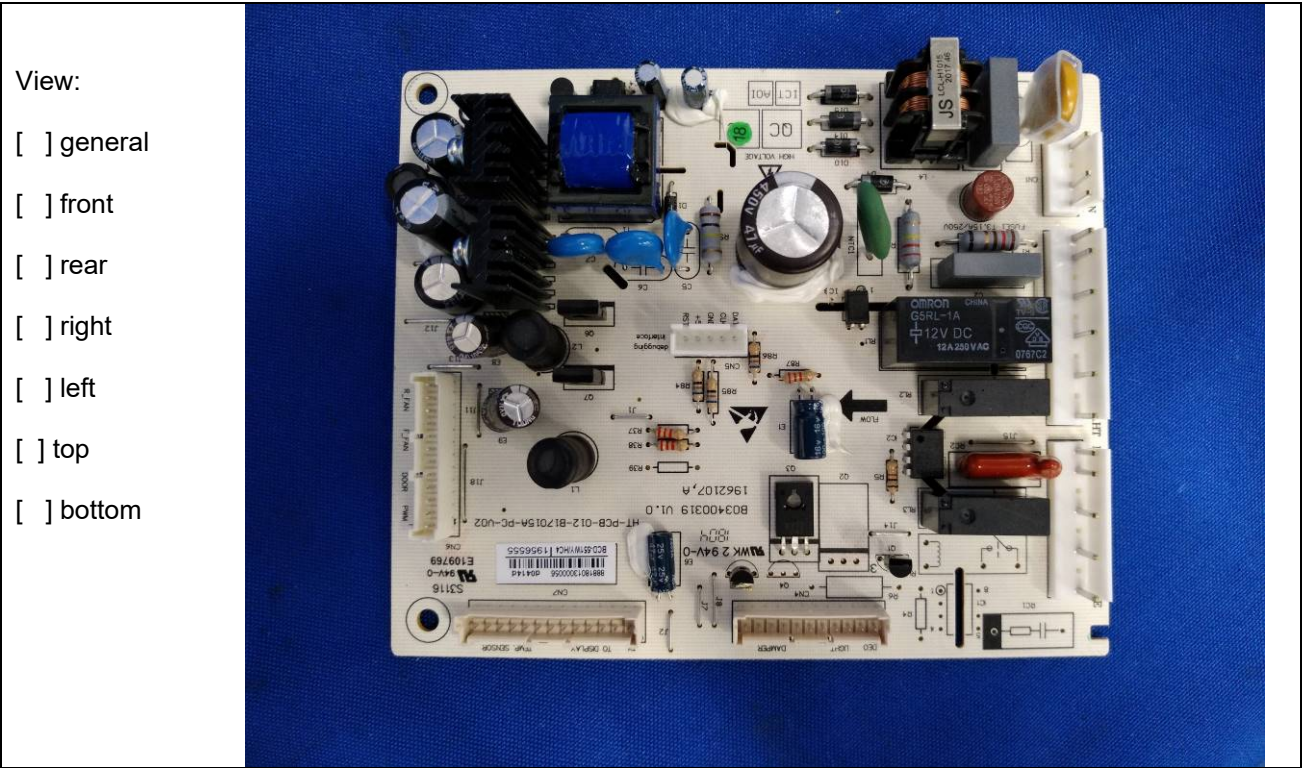
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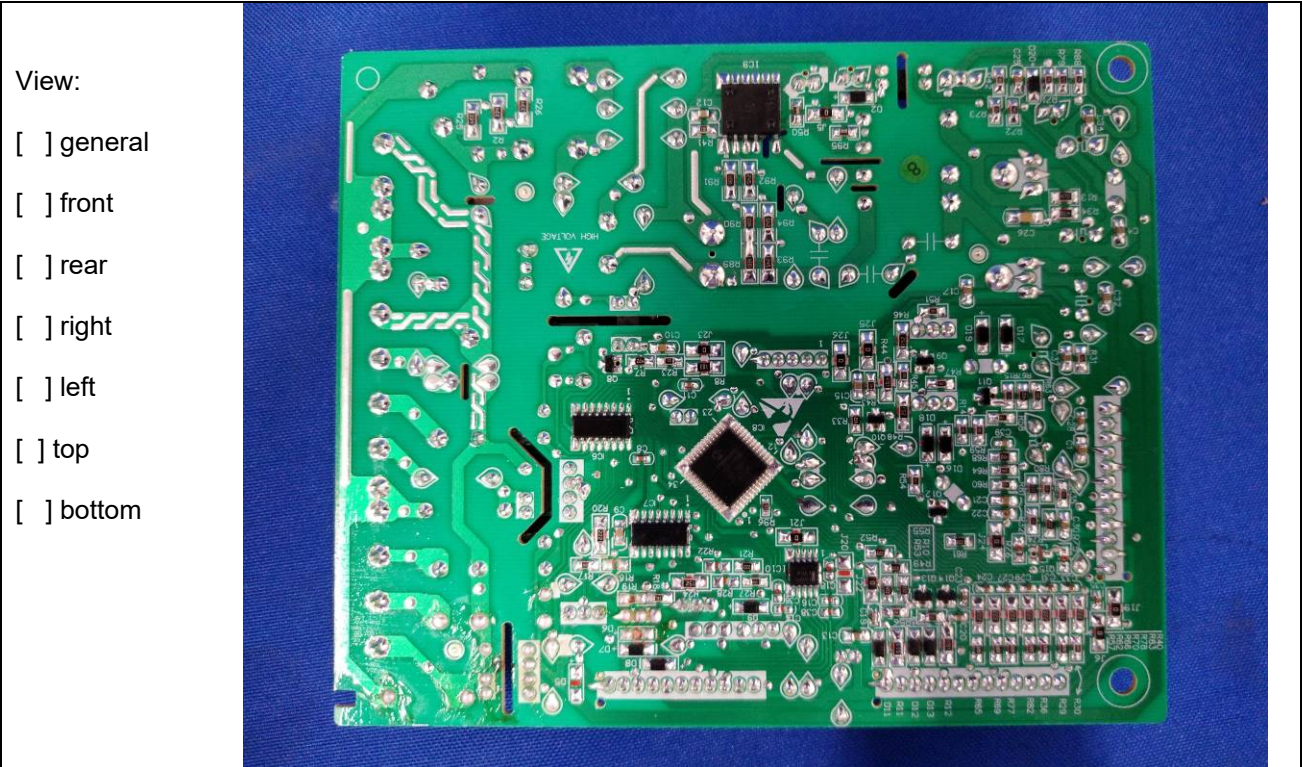
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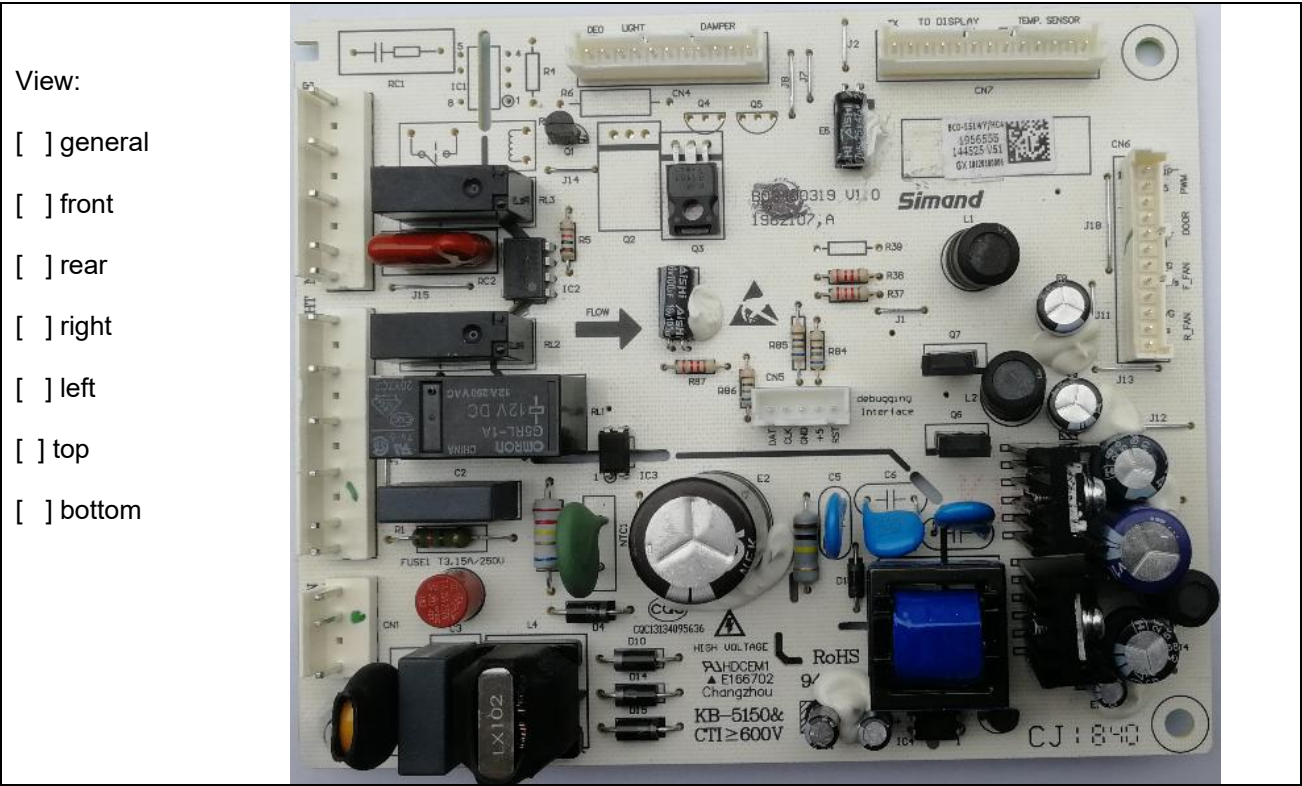
Details of: Power PCB / main control unit for RF715N4AS1, RT-72WC4S1



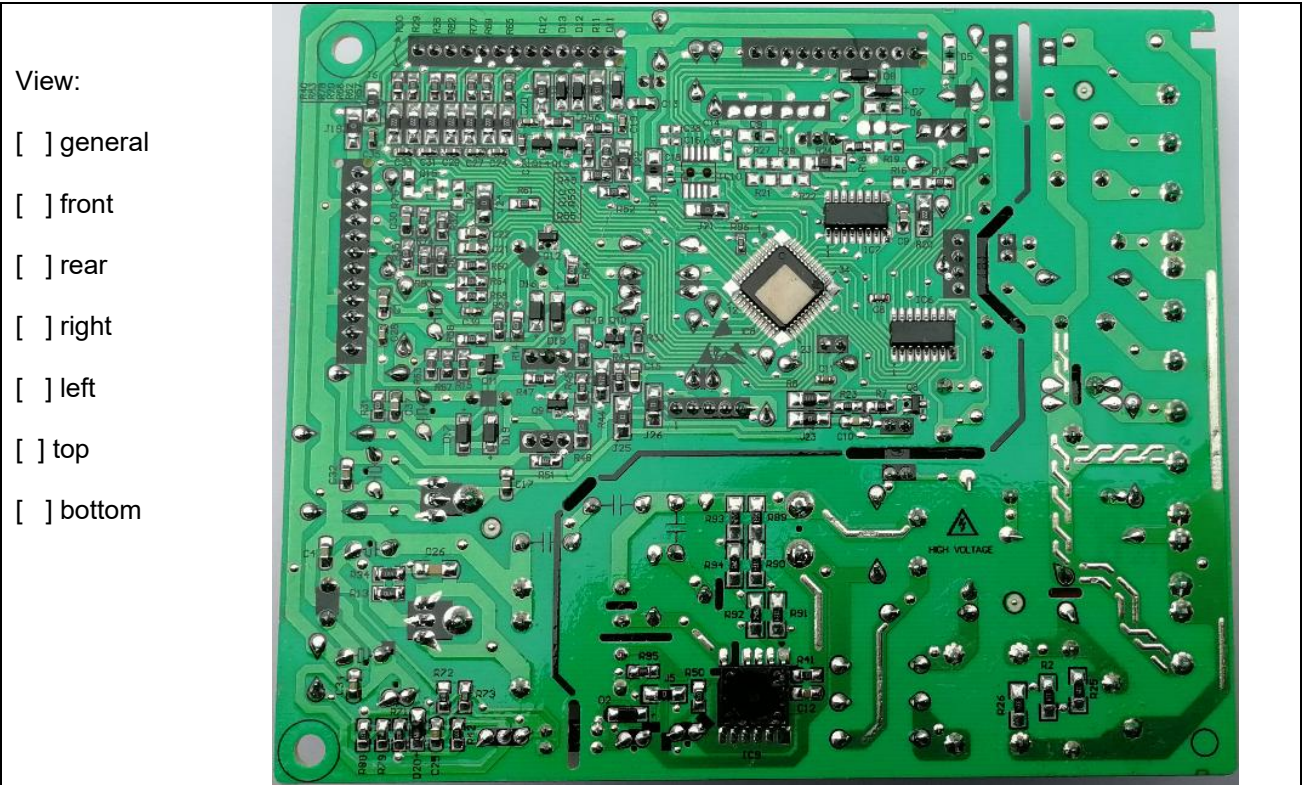
Details of: Power PCB / main control unit for RF715N4AS1, RT-72WC4S1



Details of: Power PCB / main control unit for RF715N4AS1, RT-72WC4S1



Details of: Power PCB / main control unit for RF715N4AS1, RT-72WC4S1



Report No.: GZES180300345302A1 Page 21 of 23

Page 21 of 23

Details of:

Power PCB / main control unit for RF715N4AS1, RT-72WC4S1

[] general

[] front

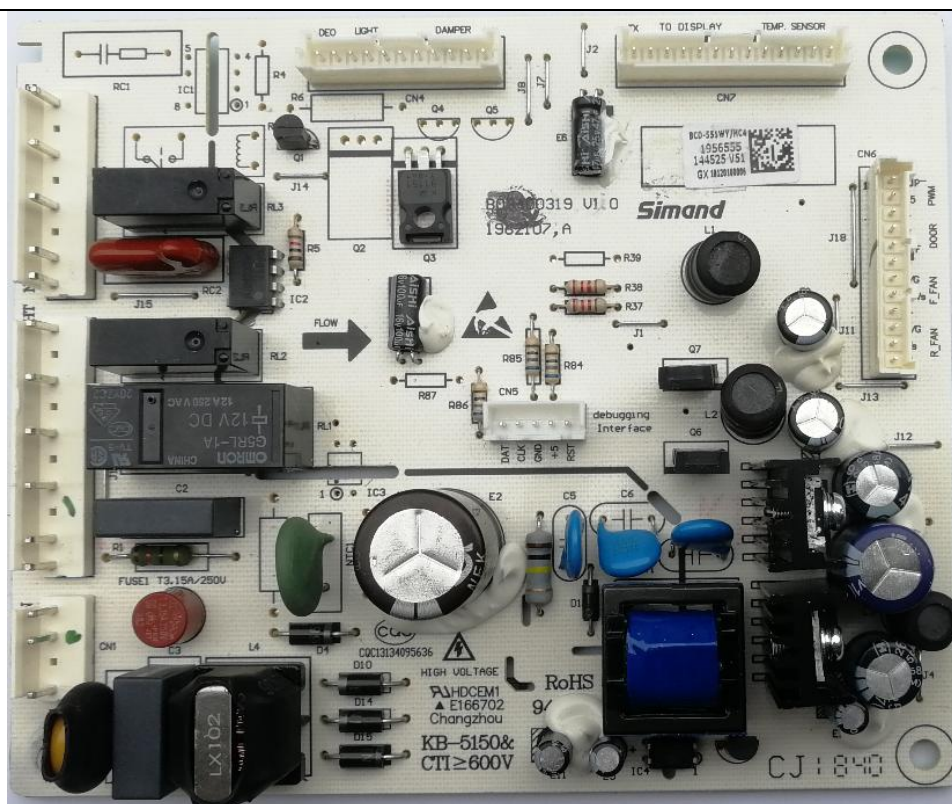
```
[ ] rear
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[] right

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[] top

[] bottom



Details of:

Power PCB / main control unit for RF715N4AS1, RT-72WC4S1

[] general

[] front

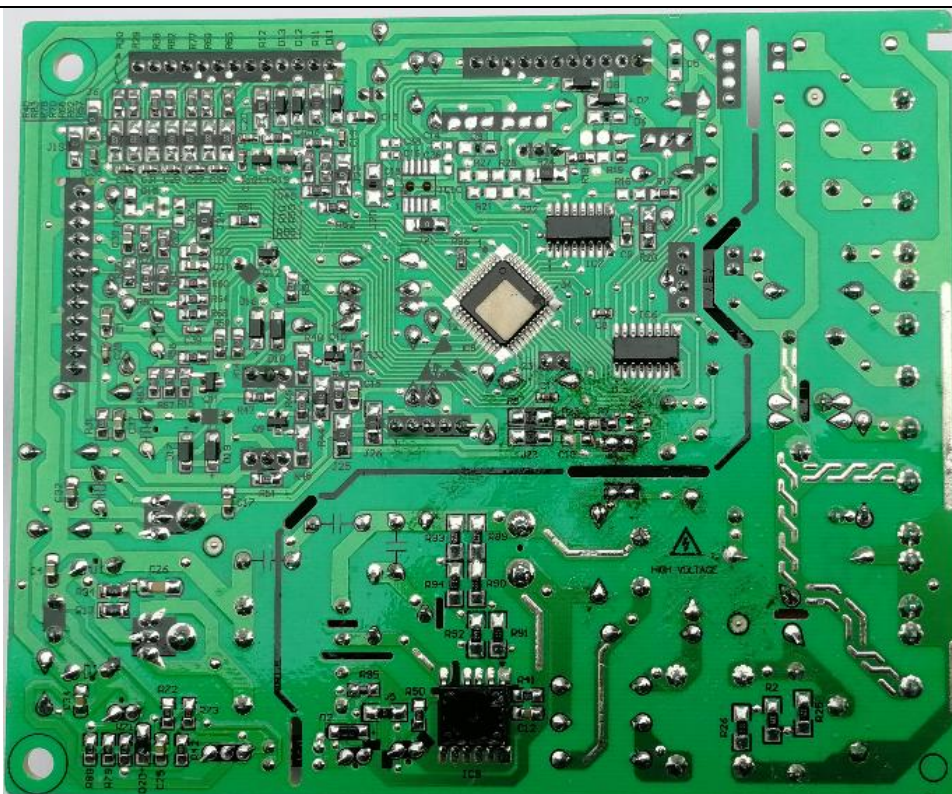
```
[ ] rear
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[] right

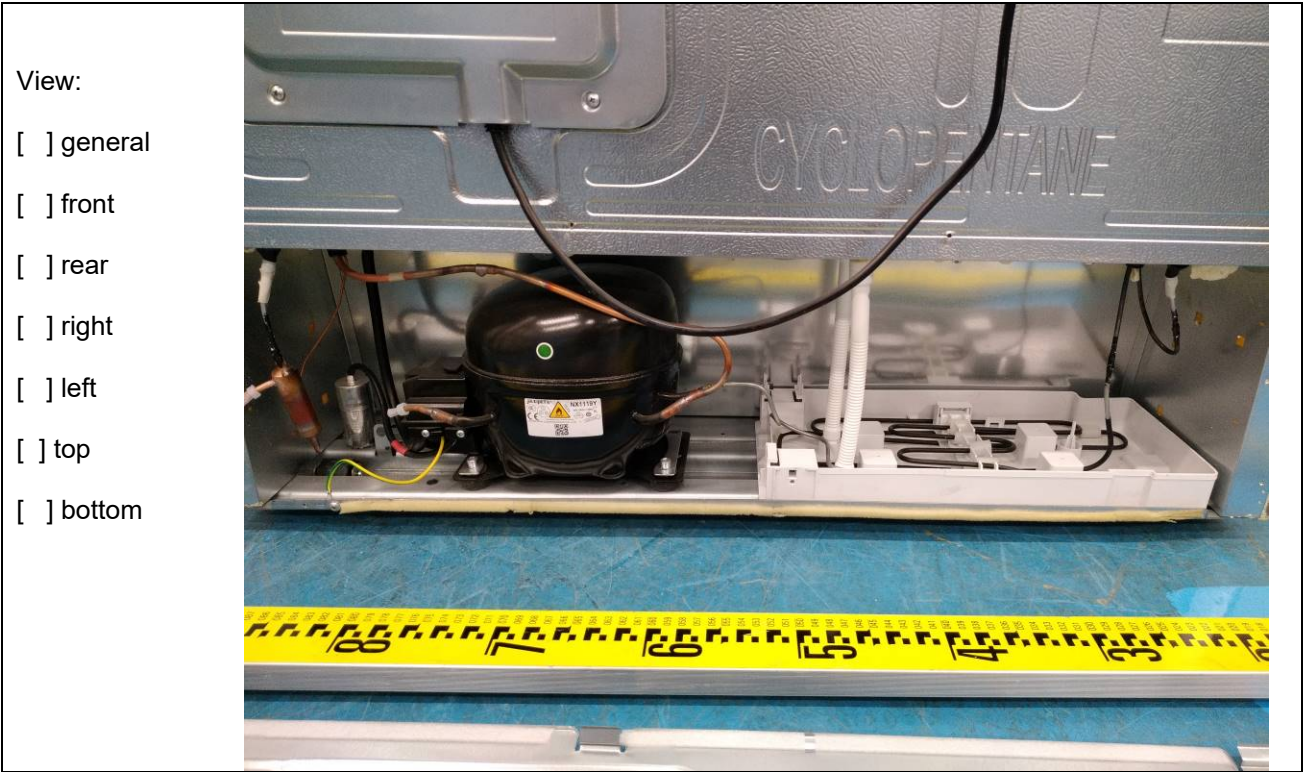
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Details of: RF715N4AS1, RT-72WC4S1



Details of: RF715N4AS1, RT-72WC4S1



Details of: RF715N4AS1, RT-72WC4S1; Control PCB



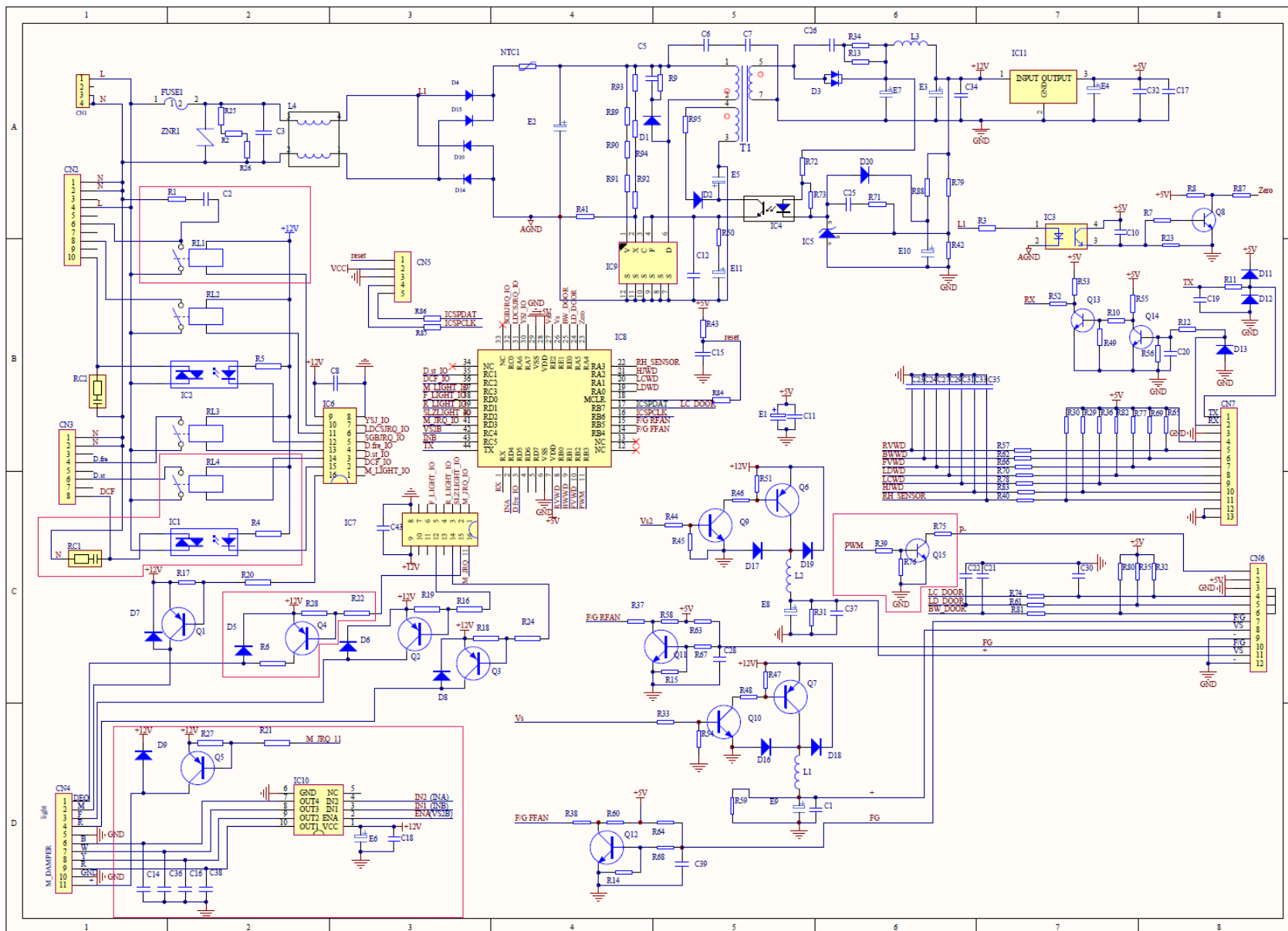
---- End of Attachment 1 ----

Attachment 2: Circuit diagram

Report No.: GZES180300345302A1

Main control unit for RF715N4AS1, RT-72WC4S1

Page 1 of 2

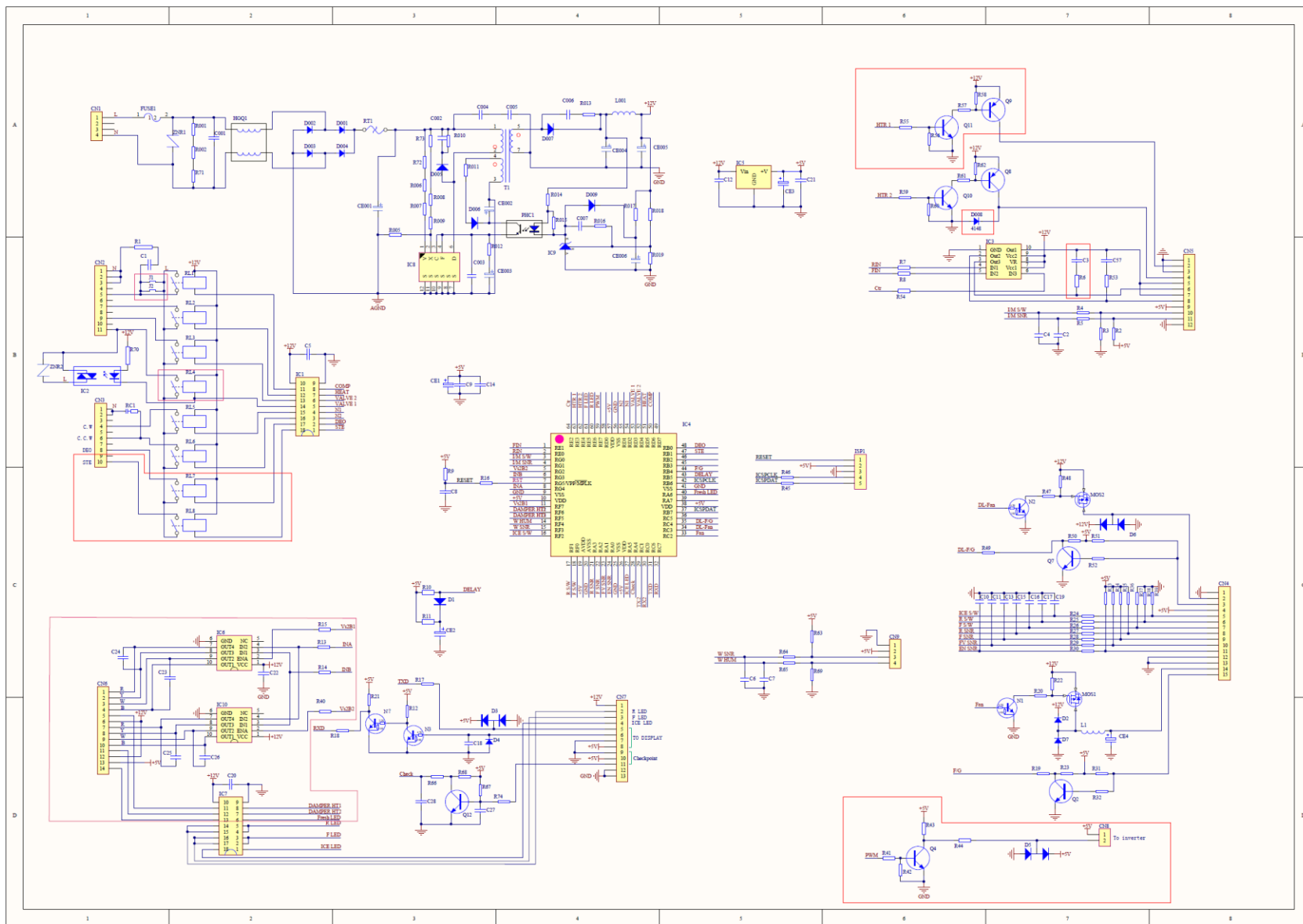


Attachment 2: Circuit diagram

Report No.: GZES180300345302A1

Main control unit for RF702N4IS1, RT-70WC4S1

Page 2 of 2



--- End of Attachment 2 ---

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Household and similar electrical appliances – Safety – Part 1: GENERAL REQUIREMENTS	
Differences according to	EN 60335-2-24: 2010 + A1: 2019 + A2: 2019 EN 60335-1: 2012 + A11:2014 + A13: 2017 EN 62233: 2008
Attachment Form No	EU_GD_IEC60335_2_24R-2
Attachment Originator	SGS-CSTC
Master Attachment	2019-02
Copyright © 2016 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.	

IEC60335-2-24R - ATTACHMENT EN 62233:2008			
Clause	Requirement + Test	Result - Remark	Verdict
EMF- ELECTROMAGNETICS FIELDS			
	The tested product also complies with the requirements of EN 62233:2008		—
	Limit 100 %	Measured max.: 3,756 %	P

CENELEC COMMON MODIFICATIONS			
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
7.10	Devices used to start/stop operational functions of the appliance distinguished from other manual devices by means of shape, size, surface texture, position, etc.		N/A
	An indication that the device has been operated is given by:		—
	• a tactile feedback, or		N/A
	• an audible and visual feedback		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

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
	Add the following paragraph after the third paragraph: (EN 60335 -2-24/A1: 2019)		—
	Children aged from 3 to 8 years are allowed to load and unload refrigerating appliances		P
7.12.Z1	The specific instructions related to the safe operation of this appliance is collated together in the front section of the user instructions		P
	The height of the characters, measured on the capital letters, is at least 3 mm		P
	These instructions are also available in an alternative format, e.g. on a website		P
7.Z101	Add the following new subclause: (EN 60335 -2-24/A1: 2019)		—
	The instructions shall contain details on the use of the appliance to ensure the safe preservation of foodstuffs.		P
	Manufacturers should give details on the most appropriate part in the compartment of the appliance where specific types of food shall be stored, considering the distribution of temperature that can be present in the different compartments of the appliance.		P
	The instructions shall include the substance of the following:		—
	To avoid contamination of food, please respect the following instructions:		—
	– Opening the door for long periods can cause a significant increase of the temperature in the compartments of the appliance.		P
	– Clean regularly surfaces that can come in contact with food and accessible drainage systems.		P
	– Clean water tanks if they have not been used for 48 h; flush the water system connected to a water supply if water has not been drawn for 5 days.		P
	– Store raw meat and fish in suitable containers in the refrigerator, so that it is not in contact with or drip onto other food.		P
	– Two-star frozen-food compartments are suitable for storing pre-frozen food, storing or making icecream and making ice cubes.		P
	– One-, two- and three-star compartments are not suitable for the freezing of fresh food.		P
	– If the refrigerating appliance is left empty for long periods, switch off, defrost, clean, dry, and leave the door open to prevent mould developing within the appliance.		P

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance is checked by inspection.		P
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test		P
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		P
8.2	Compliance is checked by applying the test probes of EN 61032		P
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A
11.8	Footnotes to "External enclosure of motor-operated appliances" to be taken into account		P
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling		N/A
20.2	When using the test probe similar to test probe B with a circular stop face, the accessories and detachable covers are removed		P
	Test probe 18 applied with a force of 2.5 N on the appliance fully assembled		P
22.40	Addition: (EN 60335 -2-24/A1: 2019)		—
	Ice-cream appliances and ice-makers shall be fitted with an accessible switch to stop all functions of the appliance.		N/A
	Add the following new subclauses: (EN 60335 -2-24/A1: 2019)		—
22.Z101	Drawers of refrigerating appliances that are provided with sliding devices shall be fitted with stops to prevent them inadvertently falling out.		P
	Compliance is checked by inspection.		P
22.Z102	Appliances shall be constructed so that lubricants are prevented from polluting food compartments.		P
	Compliance is checked by inspection.		P
22.Z104	All surfaces that can get in contact with food (including "splash areas") shall be durable, cleanable, without breaks, resistant to cracking, chipping, flaking and abrasion.		P

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE 1 The splash area comprises surfaces on which part of the food can splash or flow during normal use, but this food does not become part of the product (e.g. ice-cream).		P
	All other surfaces shall be durable and cleanable.		P
	Internal angles, seams and corners that can get in contact with food shall be effectively cleanable.		P
	Joints that can get in contact with food shall be sealed and hygienic.		P
	NOTE 2 Guidance can be found in EN 1672-2.		P
	<i>Compliance is checked by inspection.</i>		P
22.Z105	Any internal water dispensing system shall be		—
	– accessible for cleaning; or		P
	– designed to permit manual cleaning or flushing with water or other appropriate liquid in accordance with the manufacturer's instructions.		P
	The above requirements are not applicable to self-cleaning systems or chemical dosing systems.		P
	<i>Compliance is checked by inspection.</i>		P
24.1	Components comply with the safety requirements specified in the relevant standards as far as they reasonably apply		P
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance.		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P
	Components that have not been previously tested or do not comply with the standard for the relevant component are tested according to the requirements of 30.2		P
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the standard for the relevant component need not be retested provided that:		—
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		N/A
	- the test report for the component states whether it complied with the standard for the relevant component with or without flame, flames not exceeding 2 s during the test are ignored		N/A

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Unless components have been previously tested and found to comply with the relevant standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components that have not been separately tested and found to comply with the relevant 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 standard under the conditions occurring in the appliance		N/A
	Where the relevant standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		P
	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 IEC 60320-1,		N/A
	if direct supply to these parts from the supply mains gives rise to a hazard		N/A
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003		N/A
	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	For motor running capacitors (IEC 60252-1 type P2) with a metallic enclosure having an overpressure fuse the flame testing of internal plastic parts supporting current carrying connections as required in 30.2.2 and 30.2.3.1 is not necessary		N/A

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC/TR 60083:		—
	- for Class I appliances: standard sheet C2b, C3b or C4	C4	P
	- for Class II appliances: standard sheet C5 or C6		N/A
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors or when they are liable to be exposed to significant amount of ultraviolet radiation		N/A
	Halogen-free thermoplastic compound sheathed supply cords have properties at least those of:		—
	• halogen-free thermoplastic compound sheathed cords (H03Z1Z1H2-F or H03Z1Z1-F), for appliances having a mass not exceeding 3 kg		N/A
	• halogen-free thermoplastic compound sheathed cords (H05Z1Z1H2-F or H05Z1Z1-F), for other appliances		N/A
	Cross-linked halogen-free compound sheathed supply cords have properties at least those of cross-linked halogen-free compound sheathed cords (H07ZZ-F)		N/A
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position unless they are held in place near the terminals independently of the solder		P
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 50366 or EN 62233		P
	This clause of Part 1 is applicable (EN 60335 -2-24/A1: 2019)		P
Annex I, 19.1.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		N/A
	The duration of the test is as specified in 19.7		N/A

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZA	ANNEX ZA (NORMATIVE) SPECIAL NATIONAL CONDITIONS		—
	Norway		—
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
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
	All CENELEC countries		—
25.6 and 25.25	Information concerning National plug and socket-outlets is available from the CENELEC website. Normative national requirements concerning plug and socket-outlets are shown in the relevant National standard		P
	Ireland and United Kingdom		—
25.8	In the table, the lines for 10 A and 16 A are replaced by:		—
	> 10 and ≤ 13 1.25		N/A
	> 13 and ≤ 16 1.50		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		—
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. It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZC	ANNEX ZC (NORMATIVE) NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—
	A list of referenced documents in this standard		P
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		—
	A table with IEC and CENELEC code designations for flexible cords		P
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE		—
	Specific additional requirements for appliances and machines intended for commercial use.		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
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

IEC60335_2_24R - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZZ	ANNEX ZZ (INFORMATIVE) COVERAGE OF ESSENTIAL REQUIREMENTS OF EC DIRECTIVES	—
Annex ZZA	(informative) Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered	P
Annex ZZB	(informative) Relationship between this European standard and the essential requirements of Directive 2006/42/EC aimed to be covered	P

---End of Attachment 3---

IEC 60335-2-24:2010/A2:2017			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-2-24 Safety of household and similar electrical appliances Part 2: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers	
Differences according to:	IEC 60335-2-24:2010/A2:2017
Attachment Form No.:	IEC 60335-2-24/A2
Attachment Originator:	SGS-CSTC
Master Attachment:	Date 2017-12

IEC 60335-2-24:2010/A2:2017			
Clause	Requirement - Test	Result - Remark	Verdict
7	Marking and instructions		—
7.1	<i>In the first paragraph, third dashed item, delete “only”. In the first paragraph, fifth dashed item, add “or its service agent” after “manufacturer”. In the eleventh paragraph, replace “the symbol “Caution: risk of fire” with “the symbol ISO 7010 W021”.</i>		P
7.6	<i>In the note, replace “the symbol “Caution: risk of fire” with “the symbol ISO 7010 W021”.</i>		P
7.12	<i>Add the following: If symbol ISO 7010 W021 is used, its meaning shall be explained. The instructions for refrigerating appliances and ice-makers shall include the substance of the following: WARNING: When positioning the appliance, ensure the supply cord is not trapped or damaged. WARNING: Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance.</i>		P
7.14	<i>In the first paragraph, replace “the symbol “Caution: risk of fire” with “the symbol ISO 7010 W021”.</i>		P
7.15	<i>In the second paragraph, replace “the symbol “Caution: risk of fire” with “the symbol ISO 7010 W021”.</i>		P
15	Moisture resistance <i>Replace Subclauses 15.101, 15.102 and 15.103 by the following:</i>		P
15.101	<i>Appliances subject to spillage of liquid from containers onto the inside walls of the cabinet or compartment shall be constructed so that such spillage does not affect their electrical insulation. Compliance is checked by the relevant tests of 15.101.1 and 15.101.2 using the spillage solution specified in 15.2.</i>		P
15.101.1	<i>The apparatus shown in Figure 101 is filled with the spillage solution to the level of the lip, and the displacement block is supported just above the solution by means of any suitable release mechanism and bridge support. All shelves and containers which can be removed without the use of a tool are removed and the appliance is disconnected from the supply. Lamp covers are not removed.</i>		P

IEC 60335-2-24:2010/A2:2017			
Clause	Requirement - Test	Result - Remark	Verdict
	<i>The apparatus is supported with its base horizontal and so positioned and at such a height that when the release mechanism is operated, the solution is discharged over the back and side interior walls of the cabinet or compartment including any electrical components mounted thereon, in the most unfavourable manner. The test is made only once with the apparatus in any one position, but the test may be repeated as many times as necessary in different positions, provided that there is no residual solution on parts wetted by a previous test.</i>		P
	<i>Immediately after the test, the appliance shall withstand the electric strength test of 16.3 and inspection shall show that there is no trace of the solution on insulation which could result in a reduction of clearances and creepage distances below the values specified in Clause 29. Furthermore, if the inspection shows that the solution is in contact with the defrost heating element or its insulation, then the complete heating element shall withstand the test of 22.102.</i>		P
15.101.2	<i>A rectangular container having dimensions of 200 mm x 110 mm and a height of 50 mm is filled with 0,5 l of the spillage solution. The container is positioned, with its longest side parallel to the wall to be tested, on the highest shelf on which it will fit, the shelf shall have a clearance to the ceiling of the compartment of at least 130 mm. All other shelves and containers which can be removed without the use of a tool are removed. Lamp covers are not removed.</i>		P
	<i>The appliance is disconnected from the supply and the solution in the vessel is discharged over the back and side interior walls of the cabinet or compartment including any electrical components mounted thereon, in the most unfavourable manner within a period of 2 s. The test is made only once with the container in any one position, but the test may be repeated as many times as necessary in different positions, provided that there is no residual solution on parts wetted by a previous test.</i>		P
	<i>Immediately after the test, the appliance shall withstand the electric strength test of 16.3 and inspection shall show that there is no trace of the solution on insulation which could result in a reduction of clearances and creepage distances below the values specified in Clause 29. Furthermore, if the inspection shows that the solution is in contact with the defrost heating element or its insulation, then the complete heating element shall withstand the test of 22.102.</i>		P

IEC 60335-2-24:2010/A2:2017			
Clause	Requirement - Test	Result - Remark	Verdict
15.102	Appliances subject to spillage of liquid onto the top of the cabinet shall be constructed so that such spillage does not affect their electrical insulation. <i>Compliance is checked by the relevant tests of 15.103 and 15.104. The spillage solution specified in 15.2 is used for the test of 15.103.</i>		P
15.103	Appliances, other than built-in appliances, ice-makers and ice-cream appliances are tilted at an angle of up to 2° in relation to the position of normal use in the direction which is likely to be the most unfavourable for this test. One half-litre of the spillage solution is poured uniformly over the top of the appliance in approximately 60 s at the most unfavourable place from a height of approximately 50 mm with the controls in the on position and the appliance disconnected from the supply.		P
	Immediately after the test, the appliance shall withstand the electric strength test of 16.3 and inspection shall show that there is no trace of the solution on insulation which could result in a reduction of clearances and creepage distances below the values specified in Clause 29.		P
20.101	In the last paragraph of the test specification, replace "tip" by "tilt by more than 2° from the horizontal position". Delete Note 2 and replace "NOTE 1" by "NOTE".		P
20.104	Replace the second paragraph by the following: Each sliding drawer accessible without opening a door is loaded with a uniformly distributed load/unit storage volume of the compartments of 0,5 kg/l.		N/A
21.1	Add the following new subclause: Addition: For accessible glass panels , the impact energy is 1,00 J ± 0,05 J.		P
22.109	Add the following to the end of fourth paragraph of the test specification: "using a capillary tube having a diameter of 0,7 mm ± 0,05 mm." Add the following before the existing penultimate paragraph of the test specification: If the electrical component under consideration is situated within a separate enclosure and if the refrigerant can stagnate within that enclosure, then the direction of refrigerant injection shall be from the pipework joint under consideration towards any opening (such as ventilation slots or cable entry ducts) in the separate enclosure.		P
22.110	In the requirement, replace "ignition" by "auto-ignition".		P
	Replace Table 102 by the following:		P

IEC 60335-2-24:2010/A2:2017

Clause	Requirement - Test	Result - Remark	Verdict
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	<table><tr><th colspan="5">Table 102 – Refrigerant flammability parameters</th></tr><tr><th>Refrigerant number</th><th>Refrigerant name</th><th>Refrigerant formula</th><th>Refrigerant auto-ignition temperature °C</th><th>Refrigerant lower explosive limit^{a, c, d} % V/V</th></tr><tr><td>R-50</td><td>Methane</td><td>CH₄</td><td>600</td><td>4,4</td></tr><tr><td>R-290</td><td>Propane</td><td>CH₃CH₂CH₃</td><td>450</td><td>1,7</td></tr><tr><td>R-600</td><td>n-Butane</td><td>CH₃CH₂CH₂CH₃</td><td>372</td><td>1,4</td></tr><tr><td>R-600a</td><td>Isobutane</td><td>(CH₃)₂CHCH₃</td><td>460</td><td>1,3</td></tr><tr><td colspan="5">^a Values for other flammable refrigerants can be obtained from IEC 60079-20-1 and ISO 5149-1.</td></tr><tr><td colspan="5">^b Values for other flammable refrigerants can be obtained from IEC 60079-20-1 and ISO 817.</td></tr><tr><td colspan="5">^c IEC 60079-20-1 is the reference standard. ISO 5149-1 and ISO 817 may be used if the required data is not contained in IEC 60079-20-1.</td></tr><tr><td colspan="5">^d Concentration of refrigerant in dry air.</td></tr><tr><td colspan="5">^e In some standards, the term "flammability limit" is used for "explosive limit".</td></tr></table>	Table 102 – Refrigerant flammability parameters					Refrigerant number	Refrigerant name	Refrigerant formula	Refrigerant auto-ignition temperature °C	Refrigerant lower explosive limit ^{a, c, d} % V/V	R-50	Methane	CH ₄	600	4,4	R-290	Propane	CH ₃ CH ₂ CH ₃	450	1,7	R-600	n-Butane	CH ₃ CH ₂ CH ₂ CH ₃	372	1,4	R-600a	Isobutane	(CH ₃) ₂ CHCH ₃	460	1,3	^a Values for other flammable refrigerants can be obtained from IEC 60079-20-1 and ISO 5149-1.					^b Values for other flammable refrigerants can be obtained from IEC 60079-20-1 and ISO 817.					^c IEC 60079-20-1 is the reference standard. ISO 5149-1 and ISO 817 may be used if the required data is not contained in IEC 60079-20-1.					^d Concentration of refrigerant in dry air.					^e In some standards, the term "flammability limit" is used for "explosive limit".						P
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22.116	<p><i>Replace the existing text by the following:</i></p> <p>Accessible glass panels with an area having any two orthogonal dimensions exceeding 75 mm shall be made from</p> <ul style="list-style-type: none">· glass that breaks into small pieces when it fractures; or· glass that is not released or dropped from its normal position when broken. <p>This requirement does not apply to accessible glass panels with an area having any two orthogonal dimensions exceeding 75 mm inside the appliance made from glass that has enhanced mechanical strength.</p>		P																																																							
	<p><i>a) For glass that breaks into small pieces when it fractures, compliance is checked by the following test which is performed on two samples. Frames or other parts attached to the glass panel to be tested are removed and the glass is placed on a rigid horizontal flat surface.</i></p> <p>NOTE 1 The edges of the sample to be tested are contained within a frame of adhesive tape in such a manner that the broken pieces remain in place after breakage but without hindering expansion of the sample.</p>		P																																																							
	<p><i>The sample under test is broken by means of a test punch having a head with a mass of 75 g ± 5 g and a conical tungsten carbide tip with an angle of 60° ± 2°. The punch shall be positioned approximately 13 mm in from the longest edge of the glass at the midpoint of that edge. The punch is then hit by a hammer so that the glass breaks. A transparent mask of 50 mm × 50 mm is placed on the fractured glass except within a peripheral margin of 25 mm from the edge of the sample.</i></p>		P																																																							
	<p><i>The assessment shall be undertaken on at least two areas of the sample, and the areas chosen shall contain the largest particles. The number of crack free particles within the mask is counted and for each assessment shall not be less than 40. The particle count shall be made within 5 minutes of the fracture. Each particle wholly contained within the area of the mask shall be counted as one particle and each particle that is partially within the mask shall be counted as a half particle.</i></p> <p>NOTE 2 In the case of curved glass, plane pieces of the same material can be used for the test.</p>		P																																																							

IEC 60335-2-24:2010/A2:2017			
Clause	Requirement - Test	Result - Remark	Verdict
	<p><i>b) For glass that is not released or dropped from its normal position when broken, compliance is checked by breaking the glass when mounted in its normal position in the appliance by means of a test punch having a head with a mass of 75 g ± 5 g and a conical tungsten carbide tip with an angle of 60° ± 2°. The punch shall be positioned approximately 13 mm in from the longest edge of the glass at the midpoint of that edge. The punch is then hit by a hammer so that the glass breaks.</i></p> <p><i>At the conclusion of this test, the glass shall not be broken or cracked in such a manner that pieces are released or dropped from their normal position.</i></p> <p><i>Glass that is released within the immediate vicinity of the punch tip as a result of the punch impacting the sample under test is ignored.</i></p>		N/A
	<p><i>c) For glass with enhanced mechanical strength, compliance is checked by the pendulum hammer test Eha of IEC 60068-2-75.</i></p> <p><i>For the test, the glass panels are supported according to their method of incorporation in the appliance.</i></p> <p><i>The test is performed with three blows applied at the most critical point on two samples, the impact energy of each blow shall be 5 J.</i></p> <p><i>At the conclusion of the tests, the glass shall not be broken or cracked.</i></p>		N/A
23.3	<p><i>Add the following to the modification, as a new paragraph:</i></p> <p><i>The number of flexings for conductors flexed during normal use of an incorporated ice maker is increased to 50 000.</i></p>		N/A
24.7	<p><i>Modification:</i></p> <p><i>For coupling nuts used with hose-sets marked 25 °C max., the 96 h ageing test is carried out at a temperature of</i></p> <ul style="list-style-type: none"> <i>· 32 °C ± 1 °C on hose-sets supplied with appliances of extended temperate (SN) and temperate (N) classes;</i> <i>· 38 °C ± 1 °C on hose-sets supplied with appliances of subtropical (ST) class;</i> <i>· 43 °C ± 1 °C on hose-sets supplied with appliances of tropical (T) class.</i> 		N/A

IEC 60335-2-24:2010/A2:2017			
Clause	Requirement - Test	Result - Remark	Verdict
24.8	<p><i>Replacement:</i> Motor running capacitors shall not cause a hazard in the event of a capacitor failure. The requirement is considered to be met by one or more of the following conditions:</p> <ul style="list-style-type: none"> · the capacitors are of class of safety protection S2 or S3 according to IEC 60252-1; · the capacitors are housed within a metallic or ceramic enclosure that will prevent the emission of flame or molten material resulting from failure of the capacitor. <p>NOTE The enclosure can have an entry or exit hole for the wiring connecting the capacitor to the motor. <i>Compliance is checked by inspection.</i></p>		P
30.2	<p><i>Add the following to the addition:</i> <i>For accessible thermal insulation and non-metallic material on the external rear surfaces of an appliance having an area exceeding 75 cm² that is in direct contact with the thermal insulation, compliance is checked by the test of 30.2.101.</i> <i>Add the following new subclause:</i></p>		P
30.2.101	<p><i>Accessible thermal insulation and non-metallic material on the external rear surfaces of an appliance that is in direct contact with thermal insulation</i></p> <ul style="list-style-type: none"> · <i>is subject to the needle-flame test (NFT) of Annex E; or</i> · <i>shall comprise material classified as V-0 or V-1 according to IEC 60695-11-10 provided that the test sample used for the classification was no thicker than the relevant part of the appliance.</i> <p><i>Non-metallic material</i></p> <ul style="list-style-type: none"> · <i>that is within 150 mm from the top surface of the appliance;</i> · <i>that is on the left side or right side of the motor-compressor compartment;</i> · <i>that has an area not exceeding 75 cm² that is in direct contact with the thermal insulation is not tested.</i> 		P

--- End of the Attachment 4---