Test Report issued under the responsibility of:

TEST REPORT
IEC 60335-2-40
Safety of household and similar electrical appliances
Part 2-40: Particular requirements for electrical heat pumps, air conditioners and dehumidifiers

Report Number. .....:	221001491SHA-001
Date of issue .....:	November 30, 2022
Total number of pages.....:	168
Applicant's name.....:	Qingdao Haier Air Conditioner General Co., Ltd.
Address .....:	Qingdao High-Tech. Ind. Park, Haier Rd., Qingdao, Shandong 266101, P. R. China
Test specification:	
Standard .....:	IEC 60335-2-40:2002, AMD1:2005, COR1:2006, AMD2:2005 in conjunction with IEC 60335-1:2010, AMD1:2013, AMD2:2016
Test procedure .....:	-
Non-standard test method……..:	N/A
Test Report Form No.....:	IEC60335_2_40R
Test Report Form(s) Originator ....:	VDE Prüf- und Zertifizierungsinstitut GmbH
Master TRF.....:	Dated 2020-04-30

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description .....: Split Type Room Air Conditioner

Trade Mark .....: Haier, CANDY

Manufacturer.....: Qingdao Haier Air Conditioner General Co., Ltd

Model/Type reference .....:

	Indoor unit	Outdoor unit
HAIER	HAS18FAAIN	H1U18FAAOUT-1
	PKS18C	PKU18C
	PKS18CH	PKU18CH
	AS50S2SF2FA-3	1U50KEFFRA-1
	AS18FDAHRA	1U18KEFFRA
	AS50S2SF1FA-WH	1U50S2SJ2FA-2
	AS50S2SF1FA-BC	
	AS50S2SF1FA-BH	
	AS50S2SF2FA-CL	
	AS50S2SF2FA-3	
	AS50S2SF1FA-MW1	
	AS50S2SF1FA-MW3	
	AS50S2SF1FA-MB1	
	AS50S2SF1FA-MB3	
	HAS18FAAIN	
	AS50S2SF2FA-2	
	AS50S2SF1FA-LW	
	AS50S2SF1FA-CW	
CANDY	CY-18FAIN	CY-18FAOUT-1

Ratings .....: 220-240V~, 50Hz, 2350W/10,68A, R32/1,1kg; Max. working Pressure: 4,3MPa, Class I, IPX4 for outdoor unit

Testing procedure and testing location:			
☒	**Testing Laboratory:**	Intertek Testing Services Shanghai Limited	
Testing location/ address ..... :		Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, P.R. China	
Tested by (name + signature) ..... :		Jack Du	
Approved by (name + signature) ..... :		Yuetao Pan	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Approved by (name + signature) ..... :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name + signature) ..... :			
Approved by (name + signature) ..... :			
☐	**Testing procedure: CTF Stage 3 or 4:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name + signature) ..... :			
Approved by (name + signature) ..... :			
Supervised by (name + signature)..... :			

List of Attachments (including a total number of pages in each attachment):

None

Summary of testing:

EN 60335-2-40:2003 (incl. Corr.:2006) + A11:2004 + A12:2005 + A1:2006 + A2:2009 + A13:2012 (incl. Corr.:2013)

EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021

EN 62233:2008 + AC:2008

Tests performed (name of test and test clause):	**Testing location:**
Full	Same as above

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

None

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

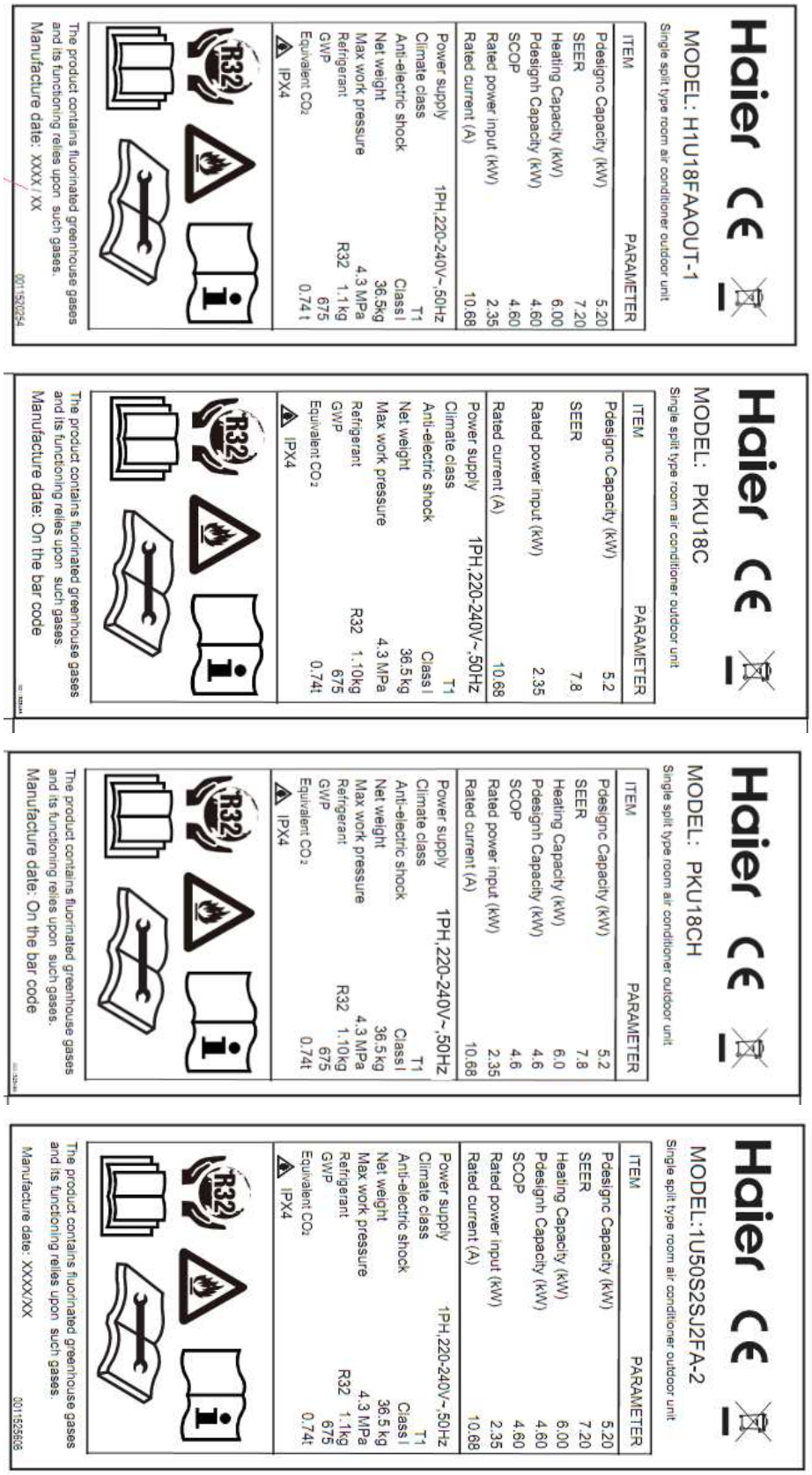
Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

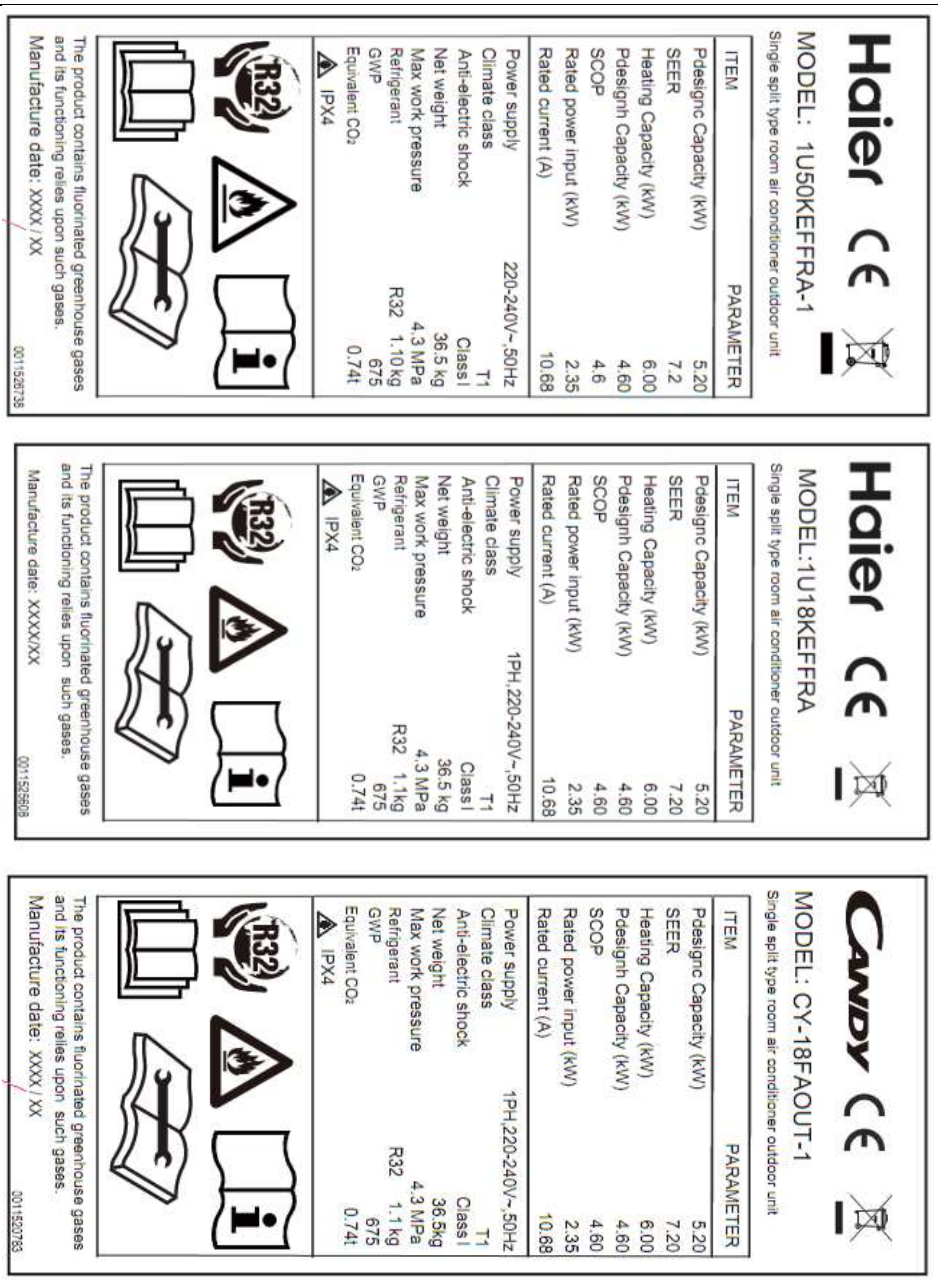
☒ **Statement not required by the standard used for type testing**

(Note: When IEC or ISO standard requires a statement concerning the uncertainty of the measurement systems used for tests, this should be reported above. The informative text in parenthesis should be delete in both cases after selecting the applicable option)

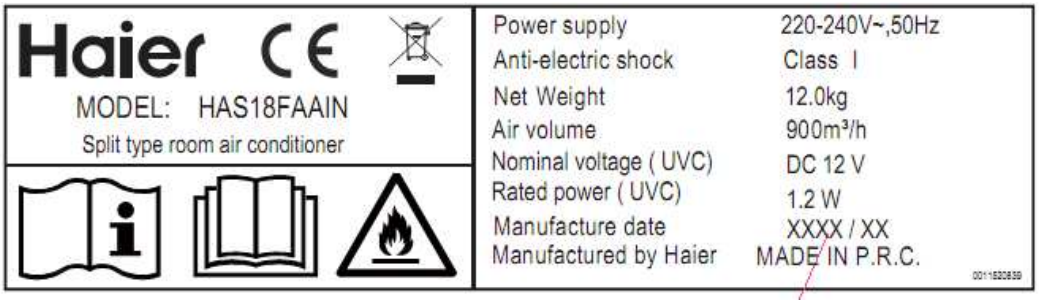
Copy of marking plate:

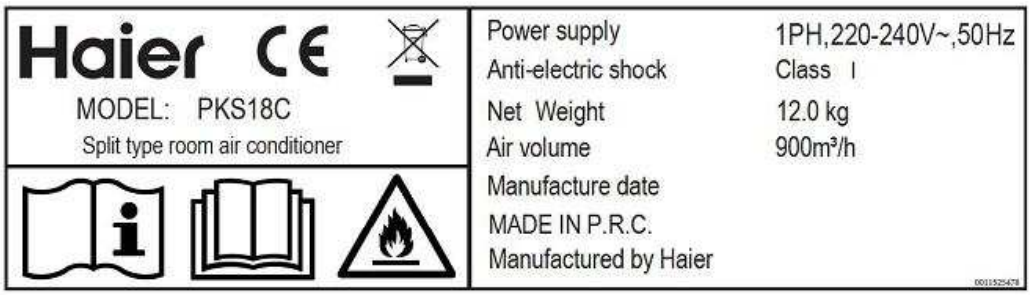
Outdoor unit labels

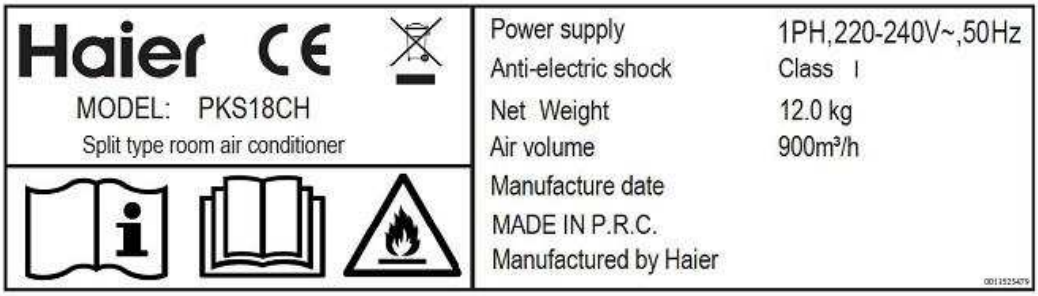




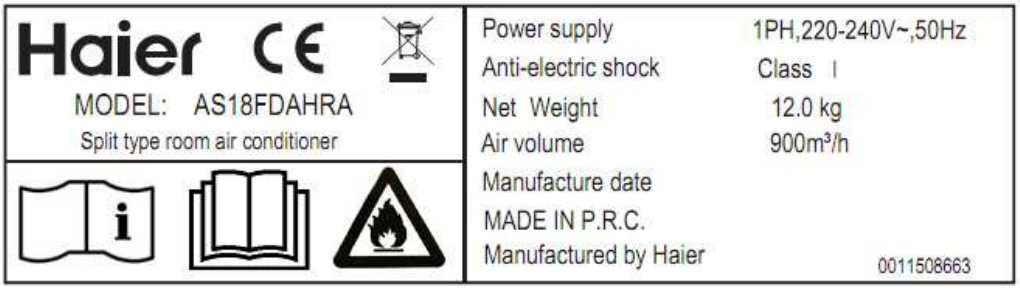
Indoor unit labels

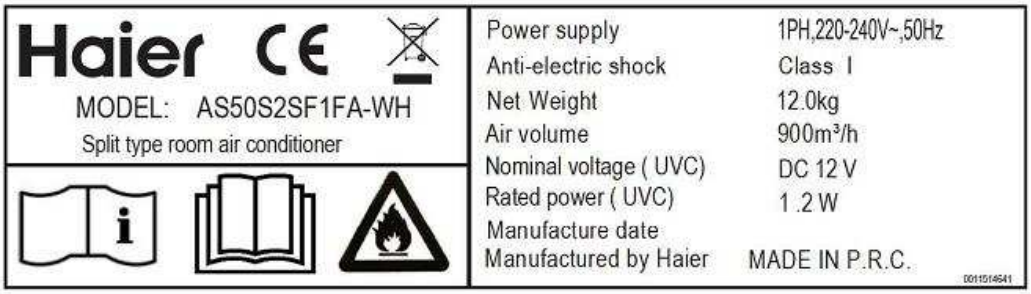


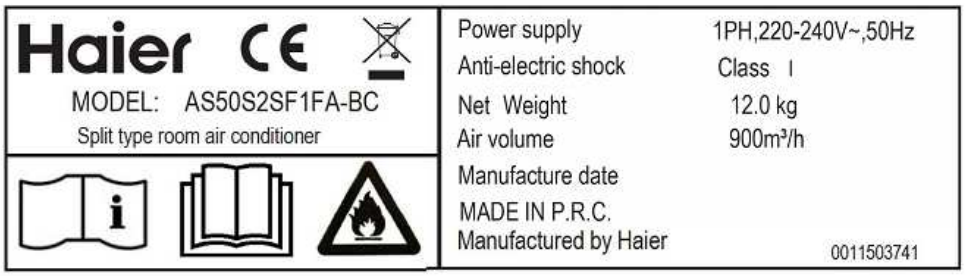

Haier CE
MODEL: PKS18C
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier

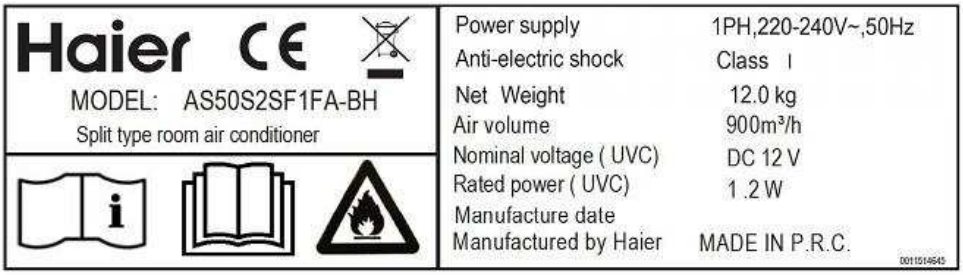

Haier CE
MODEL: PKS18CH
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier


Haier CE
MODEL: AS50S2SF2FA-3
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011513503


Haier CE
MODEL: AS18FDAHRA
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011508663


Haier CE
MODEL: AS50S2SF1FA-WH
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0kg
Air volume 900m³/h
Nominal voltage (UVC) DC 12 V
Rated power (UVC) 1 .2 W
Manufacture date
Manufactured by Haier MADE IN P.R.C.

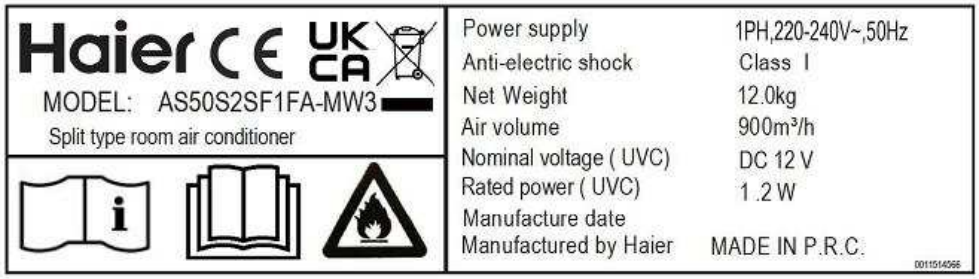

Haier CE
MODEL: AS50S2SF1FA-BC
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011503741

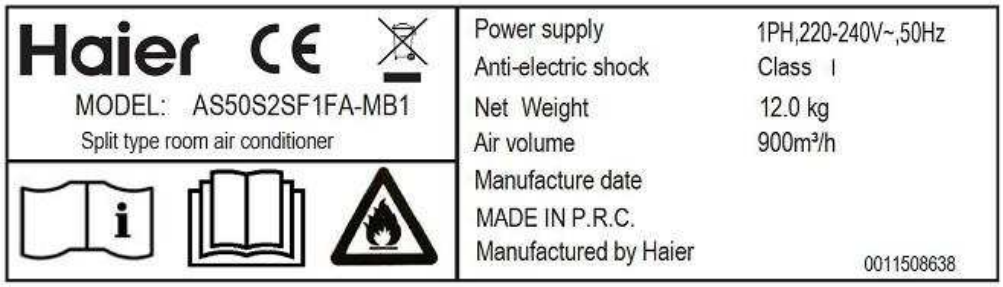

Haier CE
MODEL: AS50S2SF1FA-BH
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Nominal voltage (UVC) DC 12 V
Rated power (UVC) 1 .2 W
Manufacture date
Manufactured by Haier MADE IN P.R.C.

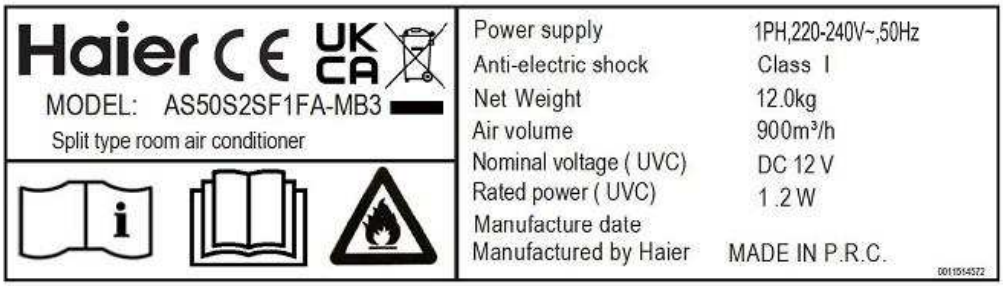

Haier CE
MODEL: AS50S2SF2FA-CL
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011501932


Haier CE
MODEL: AS50S2SF2FA-3
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011513503

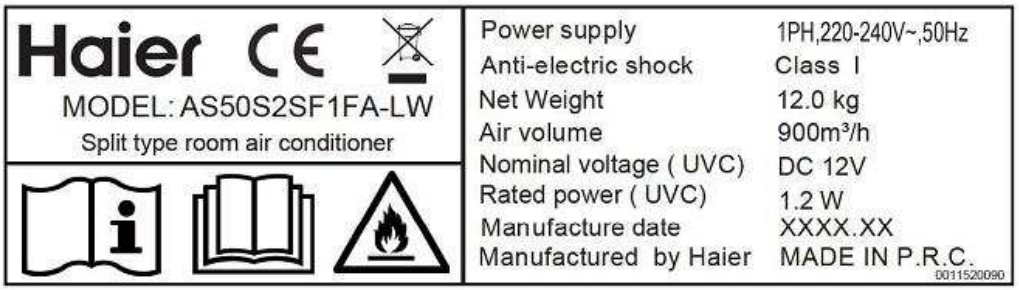

Haier CE
MODEL: AS50S2SF1FA-MW1
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011508663

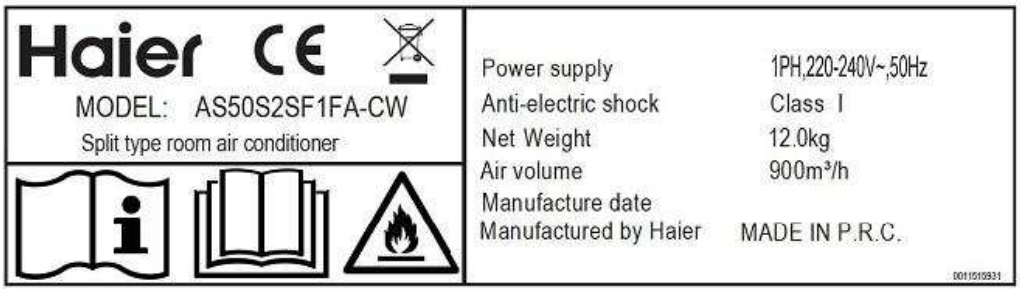

Haier CE UK CA
MODEL: AS50S2SF1FA-MW3
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0kg
Air volume 900m³/h
Nominal voltage (UVC) DC 12 V
Rated power (UVC) 1 .2 W
Manufacture date
Manufactured by Haier MADE IN P.R.C.

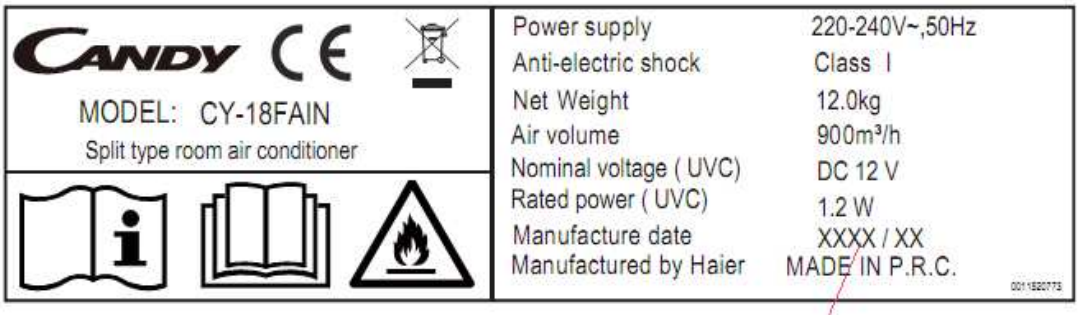

Haier CE
MODEL: AS50S2SF1FA-MB1
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011508638


Haier CE UK CA
MODEL: AS50S2SF1FA-MB3
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0kg
Air volume 900m³/h
Nominal voltage (UVC) DC 12 V
Rated power (UVC) 1 .2 W
Manufacture date
Manufactured by Haier MADE IN P.R.C.


Haier CE
MODEL: AS50S2SF2FA-2
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Manufacture date
MADE IN P.R.C.
Manufactured by Haier
0011508694


Haier CE
MODEL: AS50S2SF1FA-LW
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0 kg
Air volume 900m³/h
Nominal voltage (UVC) DC 12V
Rated power (UVC) 1.2 W
Manufacture date XXXX.XX
Manufactured by Haier MADE IN P.R.C.
0011520090


Haier CE
MODEL: AS50S2SF1FA-CW
Split type room air conditioner
Power supply 1PH,220-240V~,50Hz
Anti-electric shock Class I
Net Weight 12.0kg
Air volume 900m³/h
Manufacture date
Manufactured by Haier MADE IN P.R.C.



Note: The name and address of the importer or authorized representative within the EEA shall be added on the equipment.

Test item particulars ..... :	Split Type Room Air Conditioner
Classification of installation and use ..... :	Fixed appliance
Supply Connection ..... :	Fixed wiring with flexible cord
..... :	
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 .....:	October 21, 2022
Date (s) of performance of tests .....:	October 21, 2022 – November 29, 2022

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

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

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :	Qingdao Haier (JiaoZhou) Air Conditioner Co., Ltd. Haier Industry Park, Haier Road, Jiaozhou City, Qingdao, P.R. China

General product information and other remarks:

All outdoor units are similar except for the model reference and the trademark.
All indoor units are similar except for the model reference, trademark, the decorative part of the enclosure, and the usage of the UV LED lamps and Wi-Fi modules.

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

5	**GENERAL CONDITIONS FOR THE TESTS**		P
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.		P
5.2	Tests of clause 21 carried out on separate samples. Tests of clauses 11, 19 and 21 require pressure measurements made at various points in refrigerating system (IEC 60335-2-40/AMD1)		P
	At least one additional specially prepared sample required for tests of annex FF (Leak simulation tests) (IEC 60335-2-40/AMD1)		N/A
	Temperatures on refrigerant piping measured during test of clause 11 (IEC 60335-2-40/AMD1)		P
5.6	Appropriate controls rendered inoperative during test (IEC 60335-2-40)		P
5.7	Tests of clauses 10 and 11 carried out under most severe operating conditions within operating temperature range specified by manufacturer. Annex AA provide examples of such temperature conditions (IEC 60335-2-40)		P
5.10	For split-package units, refrigerant lines installed in accordance with installation instructions (IEC 60335-2-40)		P
	Refrigerant line length is maximum length stated in installation instructions or (IEC 60335-2-40)		P
	7,5 m, whichever is shorter (IEC 60335-2-40)		N/A
	Thermal insulation of refrigerant lines applied in accordance with installation instructions (IEC 60335-2-40)		P
5.101	Motor-compressor subjected to relevant test of clause 19 of IEC 60335-2-34, unless (IEC 60335-2-40)		P
	motor-compressor comply with that standard (IEC 60335-2-40)		N/A
5.102	Motor-compressors tested and comply with IEC 60335-2-34 need not additionally tested for clause 21 (IEC 60335-2-40/AMD1)		N/A
6	**CLASSIFICATION**		P
6.1	Protection against electric shock: Class I, II, III (IEC 60335-2-40).....:	I	P
6.2	Protection against harmful ingress of water, IP degree in accordance with IEC 60529 (IEC 60335-2-40)		-

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- appliances or parts intended for outdoor use be at least IPX4 (IEC 60335-2-40);	For outdoor unit	P
	- appliances intended only for indoor use (excluding laundry rooms) be IPX0 (IEC 60335-2-40);		N/A
	- appliances intended to be used in laundry rooms be at least IPX1 (IEC 60335-2-40).		N/A
6.101	Degree of accessibility (accessible/not accessible to the general public) (IEC 60335-2-40)		N/A
7	**MARKING AND INSTRUCTIONS**		P
7.1	Rated voltage or voltage range (V) .....:	See copy of marking	P
	Symbol for nature of supply, or .....:	See copy of marking	P
	Rated frequency (Hz) .....:	See copy of marking	P
	Rated power input (W), or .....:	See copy of marking	P
	Rated current (A) .....:	See copy of marking	P
	Manufacturer's or responsible vendor's name, trademark or identification mark.....:	See copy of marking	P
	Model or type reference .....:	See copy of marking	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0.....:		N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only, or		N/A
	for appliances powered by rechargeable batteries recharged in the appliance		N/A
	Symbol IEC 60417-5018, for class II and class III appliances incorporating a functional earth		N/A
	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
	Mass of refrigerant or of each refrigerant in blend (except for azeotropic type) (IEC 60335-2-40).....:	1,1kg	P
	Refrigerant identification (IEC 60335-2-40).....:	R32	P
	Permissible excessive operating pressure for sanitary hot water heat pumps (IEC 60335-2-40) .:		N/A
	Maximum operating pressure for heat exchanger for hydronic fan coil/air handling units (IEC 60335-2-40/AMD2).....:		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Permissible excessive operating pressure of refrigerant circuit for suction and discharge, if they differ (IEC 60335-2-40).....:	See copy of marking	P
	Symbol for degree of protection against ingress of water, other than IPX0 (IEC 60335-2-40).....:	See copy of marking	P
	Separate marking of appliances with all rated characteristics of supplementary heaters (IEC 60335-2-40).....:		N/A
	Marking of direction of fluid flow (IEC 60335-2-40)		N/A
	Flame symbol and instruction manual symbol of 7.6 visible when flammable refrigerant employed and following conditions exist (IEC 60335-2-40/AMD1):		P
	- accessing parts expected to be subjected to maintenance or repair (IEC 60335-2-40/AMD1);		P
	- observing appliance under sale or installed conditions (IEC 60335-2-40/AMD1);		P
	- observing appliance packaging, if appliance charged with refrigerant (IEC 60335-2-40/AMD1).		P
	If flammable refrigerant used, symbols for “read operator’s manual”, “operator’s manual; operating instructions” and “service indicator; read technical manual” (symbols 0790, 1641 and 1659 of ISO 7000) placed on appliance in location visible to persons required to know information. Perpendicular height be at least 10 mm (IEC 60335-2-40/AMD1/COR1)		P
	Additional warning symbol (flame symbol: B.3.2 of ISO 3864) placed on nameplate of unit near declaration of refrigerant type and charge information. Perpendicular height be at least 10 mm, and symbol need not be in colour (IEC 60335-2-40/AMD1)		P
	Following warning also applied to appliance when flammable refrigerant employed. WARNING Appliance shall be installed, operated and stored in a room with a floor area larger than ‘X’ m² (only applies to appliances that are not fixed appliances) (IEC 60335-2-40/AMD1)		N/A
	Not fixed appliances, minimum room size X specified on appliance. X in marking determined in m² by procedure described in paragraph 2 of annex GG for unventilated areas and X in marking be 4 if refrigerant charge of appliance is less than m_1 (see annex GG, paragraph 1.1) (IEC 60335-2-40/AMD1)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Maximum allowable pressure for low-pressure side and high-pressure side marked on product (IEC 60335-2-40/AMD1)		P
	If not already visible when accessing service port and if service port provided, service port marked to identify type of refrigerant. If refrigerant is flammable, symbol B.3.2 of ISO 3864, be included, without specifying the colour (IEC 60335-2-40/AMD1)		N/A
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		P
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages or rated frequencies, the voltage or the frequency setting is clearly discernible		N/A
	Requirement met if frequent changes are not required and the rated voltage to which the appliance is to be adjusted is determined from a wiring diagram		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A
	the power input is related to the arithmetic mean value of the rated voltage range		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
	Flammable refrigerant, warning symbol B.3.2 of ISO 3864, including colour and format, permanently placed on appliance. Perpendicular height of triangle containing "Caution, risk of fire" symbol be at least 30 mm (IEC 60335-2-40/AMD1)		P
	Flammable refrigerant, symbol requiring reference to manual [0790 of ISO 7000], including colour and format, permanently placed on appliance (IEC 60335-2-40/AMD1/COR1)		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Symbol for nature of supply placed next to rated voltage		P
	Symbol for class II appliances placed unlikely to be confused with other marking		N/A
	Units of physical quantities and their symbols according to international standardized system		P
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		P
	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)		P
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking of functional earthing terminals (symbol IEC 60417-5018)		N/A
	- marking not placed on removable parts		P
7.9	Marking or placing of switches which may cause a hazard		P
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means .....:	For controller, by use of figures, letters or 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		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
	Appliances not accessible to general public, classification of clause 6.101 included (IEC 60335-2-40)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances using flammable refrigerants, an installation, service and operation manual, either separate or combined manuals, provided and include information given in annex DD (IEC 60335-2-40/AMD1)		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
7.12.1	Sufficient details for installation supplied		P
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		N/A
	If different rated voltages or different rated frequencies are marked, the instructions state what action to be taken to adjust the appliance.		N/A
	Sufficient details for installation or maintenance supplied (IEC 60335-2-40):		-
	- that the appliance shall be installed in accordance with national wiring regulations (IEC 60335-2-40);		P
	- the dimensions of the space necessary for correct installation of the appliance including the minimum permissible distance to adjacent structures (IEC 60335-2-40);		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- for appliances with supplementary heaters, the minimum clearance from the appliance to combustible surfaces (IEC 60335-2-40);		N/A
	- a wiring diagram with a clear indication of the connections and wiring to external control devices and supply cord (IEC 60335-2-40);		P
	- the range of external static pressures at which the appliance was tested (add-on heat pumps and appliances with supplementary heaters only) (IEC 60335-2-40);		N/A
	- the method of connection to the appliance to the electrical supply and interconnection of separate components (IEC 60335-2-40);		P
	- indication of which parts of the appliance are suitable for outdoor use, if applicable (IEC 60335-2-40);		P
	- details of type and rating of fuses (IEC 60335-2-40);		P
	- details of supplementary heating elements that may be used in conjunction with the appliance, including fitting instructions either with the appliance or with the supplementary heater (IEC 60335-2-40);		N/A
	- maximum and minimum water or brine operating temperatures (IEC 60335-2-40);		N/A
	- maximum and minimum water or brine operating pressures (IEC 60335-2-40).		N/A
	Open storage tanks of heat pumps for water heating, accompanied by an instruction sheet which state that the vent shall not be obstructed (IEC 60335-2-40)		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		P
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		-
	- dimensions of space		N/A
	- dimensions and position of supporting and fixing		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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
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		P
7.12.8	Instructions for appliances connected to the water mains:		-
	- max. inlet water pressure (Pa) .....:		N/A
	- min. inlet water pressure, if necessary (Pa).....:		N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.12.9	Instructions specified in 7.12 and from 7.12.1 to 7.12.8 appear together before any other instructions supplied with the appliance		P
	These instructions may be supplied with the appliance separately from any functional use booklet		P
	They may follow the description of the appliance that identifies parts, or follow the drawings/sketches		P
	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 :	on a website	P
7.13	Instructions and other texts in an official language		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
7.14	Markings clearly legible and durable:		P
	Signal words WARNING, CAUTION, DANGER in uppercase having a height as specified :		P
	Uppercase letter of the text explaining the signal word not smaller than 1,6 mm :		P
	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
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		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		P
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
	The symbol IEC 60417-5018 placed next to the symbol IEC 60417-5172 or IEC 60417-5180		N/A
	Marking on panel allowed, provided panel in place for intended operation of appliance (IEC 60335-2-40)		P
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		P
7.101	Marking of fuses and overload protective devices, if replaceable (IEC 60335-2-40):		-
	- fuse rated current in amperes, type and rated voltage or (IEC 60335-2-40)		P
	- manufacturer and model of overload protective device (IEC 60335-2-40)		N/A
7.102	Marking for connection with aluminium wire, if necessary (IEC 60335-2-40)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
8	**PROTECTION AGAINST ACCESS TO LIVE PARTS**		P
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20 N: no contact with live parts		P
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		P
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032, with a force not exceeding 1 N: no contact with live parts of visible glowing heating elements		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		P
	- or separated from live parts by protective impedance		P
	If protective impedance: d.c. current not exceeding 2 mA, and		P
	a.c. peak value not exceeding 0,7 mA		P
	- for peak values over 42,4 V up to and including 450 V, capacitance not exceeding 0,1 μF		P

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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated current is related to the arithmetic mean value of the range		P
11	**HEATING**		P
11.1	No excessive temperatures in normal use (IEC 60335-2-40)		P
	Compliance is checked by the tests of annex C, if (IEC 60335-2-40):		-
	- temperature of motor winding exceeds values shown in table 3 (IEC 60335-2-40)		N/A
	- there is doubt about classification of insulation system of the motor (IEC 60335-2-40)		N/A
11.2	Placing and mounting of appliance (IEC/EN 60335-2-40):		P
	- clearances to adjacent surfaces (IEC 60335-2-40);		P
	- flow rates for liquid source or sink equipment be minimum, except for fan coils where flow rates and liquid temperatures be maximum (IEC 60335-2-40/A2);		N/A
	- static pressures (IEC 60335-2-40);		N/A
	- means of adjusting the flow, flow for tests be minimum obtainable (IEC 60335-2-40);		P
	- adjustable limit controls set at maximum cut-out setting and minimum differential (IEC 60335-2-40).		P
	Appliances with supplementary heaters, use test casing of clause 11.9 (IEC 60335-2-40)		N/A
11.2.1	Appliances with supplementary heaters, inlet duct connected to inlet air opening (IEC 60335-2-40)		N/A
11.2.2	Appliance without supplementary heaters, air outlet used (IEC 60335-2-40)		P
11.3	Temperature rise determine by thermocouples or resistance method (IEC 60335-2-40)		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
11.4	Test performed at supply voltage between 0,94 and 1,06 times the rated voltage (IEC 60335-2-40)		P
	Heating elements energized at voltage which gives an electrical input of 1,15 times maximum rated power input (IEC 60335-2-40)		N/A
11.5	Test conducted in heating mode and cooling mode, if both exist (IEC 60335-2-40)		P
	All supplementary heating elements operative simultaneously (IEC 60335-2-40)		N/A
11.6	Defrost test in most unfavourable conditions, if needed (IEC/EN 60335-2-40)		P
11.7	Appliances operated continuously until steady conditions except for defrost tests (IEC 60335-2-40)		P
11.8	Temperatures not exceeding values of table 3 (IEC 60335-2-40/A2)	(See appended tables)	P
	Protective devices do not operate (IEC 60335-2-40)		P
	Sealing compound not flowing out (IEC 60335-2-40)		P
	Temperature of air in outlet duct not exceed 90 °C (IEC 60335-2-40)		P
11.9	Test casing and installation of appliances in accordance with manufacturer's instructions (IEC 60335-2-40)		N/A
	Glass fibre insulation for appliances without indication of minimum clearances according to manufacturer; thermocouple in contact with enclosure (IEC 60335-2-40)		N/A
13	**LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE**		P
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).....:	254,4	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A
13.2	The leakage current is measured by means of the circuit described in figure 4 of IEC 60990:1999		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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 .....: (IEC 60335-2-40)	(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
	No breakdown during the tests		P
14	**TRANSIENT OVERVOLTAGES**		N/A
	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 .....:	(see appended table)	N/A
	No flashover during the test, unless		N/A
	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited		N/A
15	**MOISTURE RESISTANCE**		P
15.1	Enclosure provides degree of moisture protection against ingress of water (rain, overflow from drain pan or defrosting), tests of clause 15.2, 15.3, 11.6 and 16) (IEC 60335-2-40)		P
	Motor-compressor not operated and detachable parts removed during tests of clause 15.2 and 15.3 (IEC 60335-2-40/AMD2)		P
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		P
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529 .....:	IPX4 for outdoor unit	P
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		P
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		P
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		P
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		P
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		P
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		P
	Detachable parts are removed		P
	Overfilling test with additional amount of the solution, over a period of 1 min (l).....:	0,25	P
	The appliance withstands the electric strength test of 16.3		P

IEC 60335-2-40			
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
	Tests in accordance with IEC 60529 in appliances other than IPX0, as specified (IEC 60335-2-40) ...:		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		P
	Reassembly of those parts that may have been removed		P
	The appliance withstands the tests of clause 16		P
	Drain pan filled to brim and subjected to continuous overflow and fan(s) switched on (IEC 60335-2-40)		P
15.101	Spillage test as specified (IEC 60335-2-40/AMD2)		P
	After spillage completed, appliance withstand test of clause 16 (IEC 60335-2-40/AMD2)		P
16	**LEAKAGE CURRENT AND ELECTRIC STRENGTH**		P
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1,06 times rated voltage (V).....:	254,4	P
	Three-phase appliances: test voltage 1,06 times rated voltage divided by √3 (V) .....:		N/A
	Leakage current measurements .....: (IEC 60335-2-40)	(see appended table)	P
	Limit values doubled if:		N/A
	- 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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	With the radio interference filters disconnected, the leakage current do not exceed limits specified .....:	(see appended table)	N/A
16.3	Electric strength tests according to table 7 .....:	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified .....:	(see appended table)	P
	No breakdown during the tests		P
17	**OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS**		P
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use .....:	(see appended table)	P
	Appliance supplied with 1,06 or 0,94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V) .....:	254,4 & 206,8	P
	Basic insulation is not short-circuited		P
	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		P
	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**		N/A
	Requirements and tests are specified in part 2 when necessary		N/A
19	**ABNORMAL OPERATION**		P
19.1	The risk of fire or mechanical damage under abnormal or caGOreless operation obviated (tests 19.2-19.14) (IEC 60335-2-40)		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe .....:		P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		N/A
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		N/A
	if applicable, to the test of 19.5		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	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		P
	Failure of transfer medium flow or of any control device not result in a hazard (IEC 60335-2-40)		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe (electric shock, fire or mechanical hazard, dangerous malfunction) (test 19.11 and 19.12) (IEC 60335-2-40)		P
19.2	Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0,85 times rated power input (W) .....:		N/A
	Test of appliance with motor rotors, other than motor-compressors, operated for 15 days (360 h) or until protection device opens circuit (IEC 60335-2-40)		P
	Insulation of motor windings (IEC 60335-2-40).....:	(see appended table)	P
	Temperature of enclosure does not exceed (°C) (IEC 60335-2-40).....:	(see appended table)	P
	Temperature of the windings does not exceed the values shown in the table ; temperature (°C) (IEC 60335-2-40).....:	(see appended table)	P
	Electric strength test as specified in 16.3, 72 h after the beginning of the test (IEC 60335-2-40)		P
	30 mA residual current device does not open (IEC 60335-2-40)		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	At the end, leakage current between windings and enclosure does not exceed 2 mA (IEC 60335-2-40)		P
19.3	Test of 19.2 repeated; test voltage (V), power input of 1,24 times rated power input (W) .....:		N/A
	Motor-compressor complies with IEC 60335-2-34 (IEC 60335-2-40)		N/A
	Test of motor-compressor with rotor locked as specified in clause 19.101 of IEC 60335-2-34 and comply with 19.104 of that standard (IEC 60335-2-40)		P
19.4	Test of three-phase motors operated under conditions of clause 11 with one phase disconnected until steady conditions or protective device operates (IEC 60335-2-40)		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		N/A
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N/A
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
	Test of appliance with heat transfer medium flow of the outdoor heat exchanger restricted or shut off when reaching steady conditions (IEC 60335-2-40)		P
	Test of appliance with heat transfer flow of the indoor heat exchanger restricted or shut off when reaching steady conditions (IEC 60335-2-40)		P
	Disconnection of motor common to both the outdoor and the indoor heat exchangers when reaching steady conditions (IEC 60335-2-40)		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
	Test of appliances using water as heat transfer medium (IEC 60335-2-40)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or		N/A
	locking moving parts of other appliances		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, unless		N/A
	the capacitor is of class S2 or S3 of IEC 60252-1		N/A
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed.....:		N/A
	An electronic timer or programmer that operates to ensure compliance with the test before the maximum period under the conditions of clause 11 is reached, is a protective electronic circuit		N/A
	Other appliances supplied with rated voltage for a period as specified .....:		N/A
	Winding temperatures not exceeding values specified in table 8.....:		N/A
	Test of air to air appliances at rated voltage or at the upper limit of the rated voltage range. Dry-bulb temperature is 5 K below values specified by manufacturer (IEC 60335-2-40)		P
	Test with the dry-bulb temperature 10 K over the values specified by manufacturer (IEC 60335-2-40)		P
19.8	Multi-phase motors operated at rated voltage with one phase disconnected		N/A
	Test of appliances with supplementary heaters (IEC 60335-2-40)		N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N/A
	Motor-operated and combined appliances for which 30.2.3 is applicable and that use overload protective devices relying on electronic circuits to protect the motor windings, are also subjected to the test		N/A
	Winding temperatures not exceeding values as specified .....:		N/A
	Test at temperature permitting continuous operation of the motor-compressor and electric heating elements at same time (IEC 60335-2-40)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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
	Test of appliance with any defect which expected during normal use (IEC 60335-2-40)	(see appended table)	P
19.10.101	Test of clause 19.10 repeated on class 0I appliances and class I appliances incorporating tubular sheathed or embedded heating elements (IEC 60335-2-40/AMD2)		P
	However, controls not short-circuited but one end of element connected to sheath of heating element (IEC 60335-2-40/AMD2)		P
	Test repeated with polarity of supply to appliance reversed and with other end of element connected to sheath (IEC 60335-2-40/AMD2)		P
	Test not carried out on appliances intended to permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during test of clause 19.10 (IEC 60335-2-40/AMD2)		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in clause 19.11.2 for all circuits or parts of circuits (IEC 60335-2-40), unless		P
	they comply with conditions specified in clause 19.11.1 (IEC 60335-2-40)		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		P
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		P
	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:		P
	- 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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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
	Windings temperature not exceeding values shown in table 8 (IEC 60335-2-40)		P
	Appliance comply with conditions of clause 19.14 (IEC 60335-2-40)		P
	Appliance withstands test: a conductor becomes open circuited and three conditions are met (IEC 60335-2-40)		N/A
19.11.1	Before applying the fault conditions a) to f) in 19.11.2, it is checked if circuits or parts of circuit meet both of following conditions (IEC 60335-2-40):		-
	- electronic circuit is low-power circuit, that is, maximum power at low-power points not exceed 15 W according to tests specified (IEC 60335-2-40)		N/A
	- protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction in other parts of appliance does not rely on correct functioning of electronic circuit (IEC 60335-2-40)		N/A
19.11.2	Fault conditions applied one at a time, appliance operated under conditions specified in clause 11, but supplied at rated voltage, duration of tests as specified (IEC 60335-2-40):		-
	a) short circuit of creepage distances and clearances between live parts of different potential, if these distances less than values specified in clause 29.1, unless relevant part is adequately encapsulated (IEC 60335-2-40)		P
	b) open circuit at terminals of any component (IEC 60335-2-40)		P
	c) short circuit if capacitors, unless they comply with IEC 60384-14 (IEC 60335-2-40)		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits. This fault condition not applied between circuits of an optocoupler (IEC 60335-2-40)		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	e) failure of triacs in diode mode (IEC 60335-2-40)		P
	f) failure of an integrated circuit. Possible hazardous situations of appliance assessed to ensure that safety not rely on correct functioning of such component (IEC 60335-2-40)		P
	g) failure of an electronic power switching device		P
	Short-circuit of low-power circuits (IEC 60335-2-40)		P
	Duration of tests (IEC 60335-2-40):		-
	- as specified in clause 11.7 but only for one operating cycle, if fault cannot recognised by user (IEC 60335-2-40);		P
	- as specified in clause 19.2, if fault can recognised by user (IEC 60335-2-40);		P
	- until steady conditions established (IEC 60335-2-40).		P
	Test ended if interruption of supply occurs within the appliance (IEC 60335-2-40)		P
	If electronic circuit operates to ensure compliance with clause 19, relevant test repeated with single fault a) to f) simulated (IEC 60335-2-40)		P
	Fault condition f) applied to encapsulated or similar components (IEC 60335-2-40)		P
	PTC's, NTC's and VDR's resistors not short-circuited if used as specified by manufacturer (IEC 60335-2-40)		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		P
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		P
	a device that can be placed in the stand-by mode,		P
	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		P
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Surge protective devices disconnected, unless		P
	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		P
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, at frequency ranges specified		P
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		P
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		P
	An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode		P
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling		P
	Earthed heating elements in class I appliances disconnected		P
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		P
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		P
	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		P
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60 s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate		P
	The appliance continues to operate normally, or		N/A
	requires a manual operation to restart		P
19.12	If safety of appliance for any of fault conditions specified in clause 19.11.2 depends on operation of miniature fuse-link complying with IEC 60127, test repeated with fuse-link replaced by an ammeter (IEC 60335-2-40)		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Current ≤ 2,1 times rated current of fuse-link, circuit not adequately protected (fuse-link short-circuited) (IEC 60335-2-40)		N/A
	Current ≥ 2,75 times rated current of fuse-link, circuit adequately protected (IEC 60335-2-40)		P
	Current ≥ 2,1 and ≤ 2,75 times rated current, fuse-link short-circuited and test carried out during specified time (IEC 60335-2-40)		N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9 .....:		P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		-
	- basic insulation (V).....:	1000	P
	- supplementary insulation (V).....:	1750	P
	- reinforced insulation (V) .....:	3000	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		P
	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		P
	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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- the appliance does not start after the cycle in which the interlock was released		N/A
	Appliances with PTC heating elements test as specified (IEC 60335-2-40)		N/A
19.14	During tests of clause 19.2 to 19.10.101 and 19.11, 19.12 and 19.13 if appropriate, appliances not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts (IEC 60335-2-40/AMD2)		P
	Enclosures not deform (IEC 60335-2-40)		P
	Temperature rise not exceed values shown in table 9 (IEC 60335-2-40)	(See appended table)	P
	Electric strength test, test voltage as specified in table 4 (IEC 60335-2-40)		P
	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited		P
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time		P
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		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	All appliances provided with supplementary heaters and free air discharge subjected to specified test in each mode of operation (IEC 60335-2-40/AMD2)		N/A
	During test temperature not exceed 150 °C but an overshoot of 25 °C is permitted during first hour (IEC 60335-2-40/AMD2)		N/A
20	**STABILITY AND MECHANICAL HAZARDS**		P
20.1	Appliances having adequate stability		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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable, and		P
	have adequate mechanical strength		P
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure		P
	Not possible to touch dangerous moving parts with the test probe described		P
21	**MECHANICAL STRENGTH**		P
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying 3 blows to every point of the enclosure like to be weak, in accordance with test Ehb of IEC 60068-2-75, spring hammer test, with an impact energy of 0,5 J	(see appended table)	P
	The appliance shows no damage impairing compliance with this standard, and		P
	compliance with 8.1, 15.1 and clause 29 not impaired		P
	If doubt, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
	Safety requirements specified in annex EE applied. Pressure test in annex EE applies to parts other than pressure vessels (IEC 60335-2-40/AMD1)		P
	Safety requirements of ISO 5149 applied (IEC 60335-2-40/AMD2)		P
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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

22	**CONSTRUCTION**		P
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		-
	- a supply cord fitted with a plug, or		N/A
	- a switch complying with 24.3, or		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		P
	- an appliance inlet		N/A
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0,25 Nm		N/A
	Pull force of 50 N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1 mm		N/A
	Each pin subjected to a torque of 0,4 Nm; the pins are not rotating, unless		N/A
	rotating does not impair compliance with this standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding 0,1 μF, the appliance being disconnected from the supply at the instant of voltage peak		N/A
	Voltage not exceeding 34 V (V) .....:		N/A
	If compliance relies on the operation of an electronic circuit, the electromagnetic phenomena tests of 19.11.4.3 and 19.11.4.4 are applied		N/A
	The discharge test is then repeated three times, voltage not exceeding 34 V (V) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
	In case of doubt, test as described		P
	Electrical insulation not affected by snow penetration to appliance enclosure (IEC 60335-2-40)		P
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		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		P
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		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Tests as described	50N pull and push applied to the enclosure	P
22.12	Handles, knobs etc. fixed in a reliable manner, if loosening result in a hazard		P
	Removing or fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible, if resulting in a hazard		N/A
	A choking hazard does not apply to appliances for commercial use		N/A
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		P
	If the part is removed and can be contained within the small parts cylinder, it is considered to be a choking hazard		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operator's hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
	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 adequately supported to prevent contact with accessible metal parts in case of rupture or sagging (IEC 60335-2-40)		N/A
	Bare heating elements only used with metal enclosures (wood or composite enclosures not allowed) (IEC 60335-2-40)		N/A
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		P
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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		P
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
22.33	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		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		P
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances, 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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		P
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
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		P
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		P
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		P
	- automatically, or		N/A
	- remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts have at least double insulation or reinforced insulation between live parts and the functionally earthed parts		N/A
22.54	Button cells and batteries designated R1 not accessible without the aid of a tool, unless		N/A
	the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously		N/A
22.55	Devices operated to stop the intended function of the appliance, if any, are be distinguished from other manual devices by means of shape, size, surface texture or position :		P
	The requirement concerning position does not preclude use of a push on push off switch		P
	An indication when the device has been operated is given by:		P
	- tactile feedback from the actuator or from the appliance, or		N/A
	- reduction in heat output; or		N/A
	- audible and visible feedback		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
	This requirement does not apply to glass, ceramics or similar materials		N/A
22.101	Appliances intended to be fixed, securely fixed (IEC 60335-2-40)		P
22.102.1	At least two thermal cut-outs in appliances with supplementary heating elements for air (first one be self-resetting and other non-self-resetting thermal cut-out) (IEC 60335-2-40/AMD2)		N/A
22.102.2	Appliances provided with supplementary heaters for water incorporate non-self-resetting thermal cut-out, providing all-pole disconnection that operates separately from water thermostats (IEC 60335-2-40/AMD2)		N/A
	However, for appliances intended to be connected to fixed wiring, the neutral conductor need not be disconnected (IEC 60335-2-40/AMD2)		N/A
22.102.3	Thermal cut-outs of capillary type open in event of leakage from capillary tube (IEC 60335-2-40/AMD2)		N/A
22.103	Non-self-resetting cut-outs independent of other control devices (IEC 60335-2-40)		N/A
22.104	Containers of sanitary hot water heat pumps withstand twice permissible operating pressure in closed containers (IEC 60335-2-40) or		N/A
	0,15 MPa in open containers (IEC 60335-2-40)		N/A
	without leakage or rupture (IEC 60335-2-40)		N/A
22.105	Air or vapour cushion in closed containers not exceeding 10 % (IEC 60335-2-40)		N/A
22.106	Pressure relief devices operating at 0,1 MPa over permissible operating pressure (IEC 60335-2-40)		N/A
22.107	Water outlet systems of open containers free from obstruction causing over-pressure (IEC 60335-2-40)		N/A
	Vented containers of sanitary hot water heat pumps always open to the atmosphere through appropriate aperture (IEC 60335-2-40)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.108	Not vented open containers subjected to test in accordance with clause 22.104 to vacuum of 33 kPa for 15 min (IEC 60335-2-40)		N/A
	Container show no deformation which result in a hazard (IEC 60335-2-40)		N/A
22.109	Replacement of non-self-resetting thermal cut-outs does not damage other connections (IEC 60335-2-40)		N/A
22.110	Non-self-resetting thermal cut-outs operate without short-circuiting live parts of different potential and without causing contact between live parts and enclosure (IEC 60335-2-40)		N/A
	Test repeated five times without blowing 3 A fuse which connects appliance to earth (IEC 60335-2-40)		N/A
	Electric strength test as specified in clause 16.3 for supplementary heating elements (IEC 60335-2-40)		N/A
22.111	Manual resetting of thermostats not necessary after power supply interruption (IEC 60335-2-40)		N/A
22.112	Construction of refrigerating system comply with requirements of Section 3 of ISO 5149 (IEC 60335-2-40/AMD1)		P
22.113	Flammable refrigerant used, refrigerant tubing protected or enclosed to avoid mechanical damage (IEC 60335-2-40/AMD1)		P
	Tubing protected to extent that it will not be handled or used for carrying during moving of product (IEC 60335-2-40/AMD1)		P
	Tubing located within confines of cabinet considered to be protected from mechanical damage (IEC 60335-2-40/AMD1)		P
22.114	Flammable refrigerant used, low temperature solder alloys, such as lead/tin alloys, not acceptable for pipe connections (IEC 60335-2-40/AMD1)		P
22.115	Total refrigerant mass (M) of all refrigerating systems within appliance employing flammable refrigerants, not exceed m_3 defined in annex GG (IEC 60335-2-40/AMD1)		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.116	Appliances using flammable refrigerants constructed that any leaked refrigerant not flow or stagnate so as to cause fire or explosion hazard in areas within appliance where electrical components, which could be a source of ignition and which could function under normal conditions or in event of leak, fitted (IEC 60335-2-40/AMD1)		P
	Separate components, such as thermostats, which charged with less than 0,5 g of flammable gas not considered to cause fire or explosion hazard in event of leakage of gas within component itself (IEC 60335-2-40/AMD1)		P
	All electrical components that could be a source of ignition and which could function under normal conditions or in the event of a leak, comply with one of the following (IEC 60335-2-40/AMD1):		-
	- IEC 60079-15:2001, Cl. 9 to 26, for group IIA gases or the refrigerant used or an applicable standard that makes electrical components suitable for use in Zone 2, 1 or 0 as defined in IEC 60079-14 (IEC 60335-2-40/AMD1)		P
	- Not be located in an area where a potentially flammable gas mixture will accumulate as demonstrated by the test of annex FF (IEC 60335-2-40/AMD1)		N/A
	- Be located in an enclosure. The enclosure containing the electrical components comply with IEC 60079-15:2001 for enclosures suitable for use with group IIA gases or the refrigerant used (IEC 60335-2-40/AMD1)		N/A
22.117	Temperatures on surfaces that exposed to leakage of flammable refrigerants not exceed auto-ignition temperature of refrigerant reduced by 100 K; some typical values given in annex BB (IEC 60335-2-40/AMD1)		P
22.118	Flammable refrigerant used, all appliances charged with refrigerant at manufacturing location or charged on site as recommended by manufacturer (IEC 60335-2-40/AMD1)		P
	Part of appliance that charged on site, which requires brazing or welding in installation not shipped with flammable refrigerant charge. Joints made in installation between parts of refrigerating system, with at least one part charged, made in accordance with following (IEC 60335-2-40/AMD1):		-

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- A brazed, welded, or mechanical connection shall be made before opening the valves to permit refrigerant to flow between the refrigerating system parts. A vacuum valve shall be provided to evacuate the interconnecting pipe and/or any uncharged refrigerating system part (IEC 60335-2-40/AMD1)		P
	- Reusable mechanical connectors and flared joints are not allowed indoors (IEC 60335-2-40/AMD1)		P
	- Refrigerant tubing shall be protected or enclosed to avoid damage (IEC 60335-2-40/AMD1)		P
	Flexible refrigerant connectors (such as connecting lines between the indoor and outdoor unit) that may be displaced during normal operations shall be protected against mechanical damage (IEC 60335-2-40/AMD1)		N/A
23	**INTERNAL WIRING**		P
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	For internal wire to front panel of the indoor unit	P
	Flexible metallic tubes not causing damage to insulation of conductors		P
	Open-coil springs not used		P
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use, or		N/A
	100 flexings for conductors flexed during user maintenance		P
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Not more than 10 % of the strands of any conductor broken, and		N/A
	not more than 30 % for wiring supplying circuits that consume no more than 15 W		P
23.4	Bare internal wiring sufficiently rigid and fixed		P
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		P
	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.		P
	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		P
23.7	The colour combination green/yellow only used for earthing conductors		P
23.8	Aluminium wires not used for internal wiring		P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless		P
	the contact pressure is provided by spring terminals		N/A
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	**COMPONENTS**		P
24.1	Components comply with safety requirements in relevant IEC standards		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	List of components .....:	(see appended table)	P
	Motors not required to comply with IEC 60034-1, they are tested as part of the appliance		P
	Relays tested as part of the appliance, or		P
	alternatively acc. to IEC 60730-1, and meeting the additional requirements in IEC 60335-1		P
	The requirements of clause 29 apply between live parts of components and accessible parts of the appliance		P
	Components can comply with the requirements for clearances and creepage distances for functional insulation in the relevant component standard		P
	30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections		P
	Components that have not been previously tested to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2		P
	Components that have been previously tested to comply with the resistance to fire requirements in the IEC standard for the relevant component need not be retested provided the specified conditions are met		P
	If these conditions are not satisfied, the component is tested as part of the appliance.		P
	Power electronic converter circuits not required to comply with IEC 62477-1, they are tested as part of the appliance		N/A
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		P
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	Motor-compressors not tested according to IEC 60335-2-34 (not necessary to meet all requirements of IEC 60335-2-34) (IEC 60335-2-40)		P
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14		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 complying with IEC 61558-2-6		N/A
	If they have to be tested, they are tested according to annex G		N/A
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000		N/A
	If they have to be tested, they are tested according to annex H		N/A
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N/A
24.1.4	Automatic controls complying with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		-
	- thermostats:..... 10 000		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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- other non-self-resetting thermal cut-outs:..... 30		N/A
	- timers: 3 000		N/A
	- energy regulators: 10 000		N/A
	- thermostats which control motor-compressor (IEC/EN 60335-2-40):..... 100 000		N/A
	- motor-compressor starting relays (IEC/EN 60335-2-40):..... 100 000		N/A
	- automatic thermal motor-protectors for hermetic and semi-hermetic type motor-compressors (not less than number of operations during locked rotor test) (IEC/EN 60335-2-40):.....min 2000		N/A
	- manual reset thermal motor-protectors for hermetic and semi-hermetic type motor-compressors (IEC/EN 60335-2-40): 50		N/A
	- other automatic thermal motor-protectors (IEC/EN 60335-2-40):..... 2000		N/A
	- other manual reset thermal motor-protectors (IEC/EN 60335-2-40):..... 30		N/A
	The number of cycles for controls operating during clause 11 need not be declared, if the appliance meets the requirements of this standard when they are short-circuited		P
	Thermal motor protectors are tested in combination with their motor under the conditions specified in annex D		N/A
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A
	Thermal cut-outs of the capillary type comply with the requirements for type 2.K controls in IEC 60730-2-9		N/A
24.1.5	Appliance couplers complying with IEC 60320-1		N/A
	However, for appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N/A
	Interconnection couplers complying with IEC 60320-2-2		N/A
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691		N/A
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance		P
	They are also tested in accordance with clause 17 of IEC 60730-1, the number of cycles of operations in 24.1.4 selected according to the contactor or relay function in the appliance.....:	10 000	P
24.2	Appliances not fitted with:		-
	- switches or automatic controls in flexible cords		P
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	- thermal cut-outs that can be reset by soldering, unless		P
	the solder has a melding point of at least 230 °C		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly		N/A
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42 V		N/A
	In addition, the motors comply with the requirements of annex I		N/A
24.7	Detachable hose-sets for connection of appliances to the water mains comply with IEC 61770		N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		N/A
	One or more of the following conditions are to be met:		-
	- the capacitors are of class P2 according to IEC 60252-1		N/A
	- the capacitors are housed within a metallic or ceramic enclosure		N/A
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N/A
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of annex E		N/A
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N/A
24.101	Replaceable parts of thermal control devices identified by marking (IEC 60335-2-40)		N/A
25	**SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS**		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		N/A
	- 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
	Supply cord fitted with plug provided, if (IEC 60335-2-40):		-

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- appliance only for indoor use (IEC 60335-2-40),		N/A
	- marked with rating of 25 A or less and (IEC 60335-2-40)		N/A
	- complies with code requirements of country where it will be used (IEC 60335-2-40).		N/A
	Appliance inlet not allowed (IEC 60335-2-40)		N/A
25.2	Appliance not provided with more than one means of connection to the supply mains		P
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A
25.3	Appliance intended to be permanently connected to fixed wiring provided with one of the following means for connection to the supply mains:		-
	- a set of terminals allowing the connection of a flexible cord		P
	- 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		P
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm) .....:	flexible cord used	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:		-

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- type X attachment		N/A
	- type Y attachment		P
	- type Z attachment, if allowed in relevant part 2		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		P
25.6	Plugs fitted with only one flexible cord		N/A
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)	According to the manual, H07RN-F used	P
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 88)		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		-
	- light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg		N/A
	- ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances		N/A
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		-
	- heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg		N/A
	- heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances		N/A
	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
	Supply cords for outdoor use not lighter than polychloroprene sheathed flexible cord (60245 IEC 57) (IEC 60335-2-40)		P
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm^2).....:	According to the manual, at least 1,5 mm^2 used	P

IEC 60335-2-40			
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 the enclosure at the inlet opening is not of insulating material, 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
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		-
	- applied force (N).....:		N/A
	- number of flexings.....:		N/A
	The test does not result in:		-
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N/A
	- breakage of more than 10 % of the strands of any conductor		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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) :	0,35	P
	- other appliances: values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm) :		N/A
	Cord not damaged and max. 2 mm displacement of the cord		P
25.16	Cord anchorages for type X attachments constructed and located so that:		-
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of supply cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N/A
	they are separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N/A
	it is part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N/A
	failure of the insulation of the cord does not make accessible metal parts live		N/A
	- for class II appliances they are of insulating material, or		N/A
	if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals		N/A
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance	type Y	P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	Constructed so that the cord can only be fitted with the aid of a tool		P
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		P
25.20	The insulated conductors of the supply cord for type Y and Z attachment additionally insulated from accessible metal parts	type Y	P
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		-
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		N/A
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A
25.22	Appliance inlets:		-

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- live parts not accessible during insertion or removal		N/A
	Requirement not applicable to appliance inlets complying with IEC 60320-1		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless		N/A
	the supply cord is unlikely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except that:		-
	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11		N/A
	- the thickness of the insulation may be reduced		N/A
	- for class I or class II appliance with class III construction, the cross sectional areas of the conductors need not comply with 25.8 if specified conditions are met		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected		P
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
26	**TERMINALS FOR EXTERNAL CONDUCTORS**		P
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

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Clause	Requirement + Test	Result - Remark	Verdict
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		P
	the connections are soldered		N/A
	Screws and nuts not used to fix any other component, except		P
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		P
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N/A
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		P
	Terminals fixed so that when the clamping means is tightened or loosened:		-
	- the terminal does not become loose		P
	- internal wiring is not subjected to stress		P
	- neither clearances nor creepage distances are reduced below the values in clause 29		P
	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).....:	1,2Nm	P
	No deep or sharp indentations of the conductors		P
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and		N/A
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and,		N/A
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm²).....:	1,5 and 2,5 mm² can be used	P
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		P
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		P
	conductors ends fitted with means suitable for screw terminals		N/A
	Pull test of 5 N to the connection		P
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	type Y	N/A
	For class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		N/A
27	**PROVISION FOR EARTHING**		P

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Clause	Requirement + Test	Result - Remark	Verdict
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 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 mm², and		N/A
	- do not provide earthing continuity between different parts of the appliance, and		N/A
	- conductors cannot be loosened without the aid of a tool		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		N/A
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		P
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		P
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω) .....:	0,041	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
	Requirements not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes		N/A
28	**SCREWS AND CONNECTIONS**		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	No insulating material	N/A
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		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:		-
	- 30.2.2 is applicable and that carry a current not exceeding 0,5 A		N/A
	- 30.2.3 is applicable and that carry a current not exceeding 0,2 A		P
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,		P
	- during user maintenance,		P
	- when replacing a supply cord having a type X attachment, or		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- during installation		P
	At least two screws being used for each connection providing earthing continuity, unless		P
	the screw forms a thread having a length of at least half the diameter of the screw		P
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		P
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion		P
29	**CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION**		P
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies .....:		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation .....:		N/A
	For motor-compressor not complying with IEC 60335-2-34, additions and modifications as specified (IEC 60335-2-40)		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

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Clause	Requirement + Test	Result - Remark	Verdict
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500 V and above are increased by 0,5 mm and the impulse voltage test is not applicable		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		P
	- for basic insulation of class 0 and class 01 appliances		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		N/A
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable.....:	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		P
	Lacquered conductors of windings considered to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16 .....:	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage .....:	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
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		P
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N/A
	the microenvironment is pollution degree 3, or		P
	the distances can be affected by wear, distortion, movement of the parts or during assembly		P
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		P
	Lacquered conductors of windings considered to be bare conductors		P
	However, clearances at crossover points are not measured		P
	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 .....:		P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		P
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		P
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
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		P
	- precautions taken to protect the insulation; pollution degree 1		P
	- insulation subjected to conductive pollution; pollution degree 3		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
	Insulation located in airflow, pollution degree 3 unless (IEC 60335-2-40)		P
	insulation enclosed or located so that unlikely to be exposed to pollution due to normal use (IEC 60335-2-40)		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17 .....:	Not exceeding	P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or .....:	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable .....:		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or .....:	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable .....:		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18 .....:		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		P
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		-
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		P
	- for insulation, other than single layer internal wiring insulation, by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		P
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- by an assessment of the thermal quality of the material according to 29.3.3 combined with an electric strength test in accordance with 23.5, for each single layer internal wiring insulation touching each other, or		P
	- 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		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Reinforced insulation have a thickness of at least 2 mm		P
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		P
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		P
	the electric strength test of 16.3		P
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		P
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19.....:		N/A
30	**RESISTANCE TO HEAT AND FIRE**		P
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)	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)	P
	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C) .....:	(see appended table)	N/A
30.2	Parts of non-metallic material resistant to ignition and spread of fire		P
	This requirement does not apply to:		-

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	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		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		P
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 .....:	– soldered connections on PCB and parts within a distance of 3 mm of these connections; – connections on small components on PCB and parts within a distance of 3 mm of these connections.	P
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and		P
	parts of non-metallic material, other than small parts, within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Glow-wire applied to an interposed shielding material, if relevant		P
	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		P
30.2.3.2	Parts of non-metallic material supporting connections, and		P
	parts of non-metallic material within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with appropriate severity level:	(see appended table 30.2)	P
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		P
	- 650 °C, for other connections		N/A
	Glow-wire applied to an interposed shielding material, if relevant		P
	However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications:		-
	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N/A
	- 775 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 675 °C, for other connections		N/A
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:		N/A
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	The glow-wire test is also not carried out on small parts. These parts are to:		-
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of annex E, or		N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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**		P
	Relevant ferrous parts adequately protected against rusting		P
	Tests specified in part 2 when necessary		P
	Salt mist test of IEC 60068-2-52, severity 2 (IEC 60335-2-40)		P
	Before test, coatings are scratched by means of a harden steel pin as specified (IEC 60335-2-40)		P
	Five scratches made at least 5 mm apart and at least 5 mm from the edges (IEC 60335-2-40)		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Appliance not deteriorated to such an extent that compliance with clause 8 and 27 is impaired (IEC 60335-2-40)		P
	Coating not be broken and not loosened from the metal surface (IEC 60335-2-40)		P
32	**RADIATION, TOXICITY AND SIMILAR HAZARDS**		P
	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use		P
	Compliance is checked by the limits or tests specified in part 2, if relevant		P
A	**ANNEX A (INFORMATIVE) ROUTINE TESTS**		N/A
	Description of routine tests to be carried out by the manufacturer		N/A
B	**ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES**		N/A
	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:		N/A
	a) Appliance supplied directly from the supply mains or a renewable energy source, the battery charging circuitry and other supply unit circuitry incorporated within the appliance		N/A
	b) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the part of the appliance containing the battery		N/A
	c) The part of the appliance incorporating the battery is supplied from the supply mains or a renewable energy source, via a detachable supply unit. The battery charging circuitry is incorporated within the detachable supply unit		N/A
3.1.9	Appliance operated under the following conditions:		-
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- f possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	- if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N/A
	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006		N/A
	Appliances intending to be supplied from a detachable supply unit marked with symbol IEC 60417-6181 and its type reference along with symbol ISO 7000-0790 (2004-01), or		N/A
	use only with <model designation> supply unit :		N/A
7.6	Symbols 60417-5005 and IEC 60417-5006		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:		-
	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:		-

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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**		N/A
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
	Test conditions as specified		N/A
D	**ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS**		N/A
	Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard		N/A
	Test conditions as specified		N/A
E	**ANNEX E (NORMATIVE) NEEDLE-FLAME TEST**		P
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		-
7	Severities		-
	The duration of application of the test flame is 30 s ± 1 s		P
9	Test procedure		-
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1		P
9.2	The first paragraph does not apply		P
	If possible, the flame is applied at least 10 mm from a corner		P
9.3	The test is carried out on one specimen		P

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Clause	Requirement + Test	Result - Remark	Verdict
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		P
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**		N/A
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		-
1.5	Terms and definitions		-
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A
1.6	Marking		-
	Items a) and b) are applicable		N/A
3.4	Approval testing		-
3.4.3.2	Table 3 is applicable as described		N/A
4.1	Visual examination and check of dimensions		-
	This subclause is applicable		N/A
4.2	Electrical tests		-
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A
4.2.5.2	Only table 11 is applicable		N/A
	Values for test A apply		N/A
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		-
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		-
	This subclause is applicable		N/A
4.14	Endurance		-

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Clause	Requirement + Test	Result - Remark	Verdict
	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**		N/A
	The following modifications to this standard are applicable for safety isolating transformers:		-
7	Marking and instructions		-
7.1	Transformers for specific use marked with:		-
	- name, trademark or identification mark of the manufacturer or responsible vendor .....:		N/A
	- model or type reference .....:		N/A
17	Overload protection of transformers and associated circuits		-
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		-
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N/A
29	Clearances, creepage distances and solid insulation		-
29.1, 29.2, 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N/A
	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances		N/A
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict

H	**ANNEX H (NORMATIVE)** **SWITCHES**		N/A
	Switches comply with the following clauses of IEC 61058-1, as modified below:		-
	The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N/A
	Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		-
	Switches are not required to be marked		N/A
	However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		-
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		-
15.1	Not applicable		N/A
15.2	Not applicable		N/A
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		-
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless		N/A
	otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335 .....:		N/A
	Switches for operation under no load and which can be operated only by a tool, and		N/A
	switches operated by hand that are interlocked so that they cannot be operated under load,		N/A
	are not subjected to the tests		N/A
	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation		N/A
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of clause 11 in IEC 60335-1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		-
	This clause is applicable to clearances and 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**		N/A
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		-
8	Protection against access to live parts		-
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		-
11.3	The temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	The temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N/A
16	Leakage current and electric strength		-
16.3	Insulation between live parts of the motor and its other metal parts is not subjected to the test		N/A
19	Abnormal operation		-
19.1	The tests of 19.7 to 19.9 are not carried out		N/A
19.I.101	Appliance operated at rated voltage with each of the following fault conditions:		N/A
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22	Construction		-
22.I.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
J	**ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS**		N/A
	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**		P
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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**		P
	Information for the determination of clearances and creepage distances		P
M	**ANNEX M (NORMATIVE) POLLUTION DEGREE**		P
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		-
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		-
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		-
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		P
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		P
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		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**		P
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		-

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Clause	Requirement + Test	Result - Remark	Verdict
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 100 V, 175 V, 400 V or 600 V .....:	175	P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25 V, the number of drops increased to 100		N/A
10.2	Report		-
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	**ANNEX O (INFORMATIVE)** **SELECTION AND SEQUENCE OF THE TESTS OF clause 30**		P
	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 WARM DAMP EQUABLE CLIMATES**		N/A
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a warm damp equable climate and that are marked WDaE		-
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150 V, intended to be used in countries having a warm damp equable climate and that are marked WDaE, if liable to be connected to a supply mains that excludes the protective earthing conductor		-
5.7	The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C		N/A
7.1	The appliance marked with the letters WDaE		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 warm damp equable climate, but may also be used in other countries		N/A
11.8	The values of Table 3 are reduced by 15 K		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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**		P
	Description of tests for appliances incorporating electronic circuits		-
R	**ANNEX R (NORMATIVE)** **SOFTWARE EVALUATION**		N/A
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex		N/A
R.1	Programmable electronic circuits using software		-
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 constructed so that the software does not impair compliance with the requirements of this standard		N/A
R.2	Requirements for the architecture		-
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety-related segments of the software		N/A
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:		-
	- single channel with periodic self-test and monitoring		N/A
	- dual channel (homogenous) with comparison		N/A
	- dual channel (diverse) with comparison		N/A
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures:		-
	- single channel with functional test		N/A
	- single channel with periodic self-test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- dual channel without comparison		N/A
R.2.2	Measures to control faults/errors		-
R.2.2.1	When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area		N/A
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison		N/A
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths		N/A
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate		N/A
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		-

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
R.3.2	Specification		-
R.3.2.1	Software safety requirements:	Software Id:	N/A
	The specification of the software safety requirements includes the descriptions listed		N/A
R.3.2.2	Software architecture		-
R.3.2.2.1	The specification of the software architecture includes the aspects listed - techniques and measures to control software faults/errors (refer to R.2.2); - interactions between hardware and software; - partitioning into modules and their allocation to the specified safety functions; - hierarchy and call structure of the modules (control flow); - interrupt handling; - data flow and restrictions on data access; - architecture and storage of data; - time-based dependencies of sequences and data	Document ref. No:	N/A
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

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Clause	Requirement + Test	Result - Remark	Verdict

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

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	Ver-dict
1 CPU						N/A
1.1 Registers	Stuck at	Functional test, or	H.2.16.5			
		periodic self-test using either:	H.2.16.6			
		- static memory test, or	H.2.19.6			
		- word protection with single bit redundancy	H.2.19.8.2			
1.2 VOID						-
1.3 Programme counter	Stuck at	Functional test, or	H.2.16.5			N/A
		Periodic self-test, or	H.2.16.6			
		Independent time-slot monitoring, or	H.2.18.10.4			
		Logical monitoring of the programme sequence	H.2.18.10.2			
2 Interrupt handling and execution	No interrupt or too frequent interrupt	Functional test, or	H.2.16.5			N/A
		time-slot monitoring	H.2.18.10.4			

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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	Ver-dict
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
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						-
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						-

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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	Ver-dict
6.2 VOID						-
6.3 Timing	Wrong point in time	Time-slot monitoring, or	H.2.18.10.4			N/A
		scheduled transmission	H.2.18.18			
		Time-slot and logical monitoring, or	H.2.18.10.3			
		comparison of redundant communication channels by either:				
		- reciprocal comparison	H.2.18.15			
		- independent hardware comparator	H.2.18.3			
	Wrong sequence	Logical monitoring, or	H.2.18.10.2			
		time-slot monitoring, or	H.2.18.10.4			
		Scheduled transmission	H.2.18.18			
7 Input/output periphery	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			N/A
7.1 VOID						-
7.2 Analog I/O						N/A
7.2.1 A/D and D/A-converter	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			
7.2.2 Analog multiplexer	Wrong addressing	Plausibility check	H.2.18.13			N/A
8 VOID						-
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

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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	Ver-dict
NOTE A Stuck-at fault model denotes a fault model representing an open circuit or a non-varying signal level. A DC fault model denotes a stuck-at fault model incorporating short circuit between signal lines.						
[a] For fault/error assessment, some components are divided into their sub-functions. [b] For each sub-function in the table, the Table R.2 measure will cover the software fault/error. [c] Where more than one measure is given for a sub-function, these are alternatives. [d] To be divided as necessary by the manufacturer into sub-functions. [e] Table R.1 is applied according to the requirements of R.1 to R.2.2.9 inclusive.						

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

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

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Clause	Requirement + Test	Result - Remark	Verdict
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**		P
	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		P
	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/m2 at 254 nm		P
	Subclause 5.1.6.1 and Table 1 are not applicable		P
5.2.4	The black-panel temperature shall be 63 °C +/- 3 °C		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.1	Humidification of the chamber air is specified in part 2 when necessary		P
9	This clause is not applicable		P
	Modifications to ISO 4892-2:		-
7.1	At least three test specimens are tested		P
	Ten samples of internal wiring is tested		P
7.2	The specimens are attached to the specimen holders such that they are not subject to any stress		P
7.3	Apparatus prepared as specified		P
	The test specimens and, if used, the irradiance-measuring instrument are exposed for 1 000 h		P
7.4	If used, a radiometer is mounted and calibrated such that it measures the irradiance at the exposed surface of the test specimen		P
7.5	Material properties and test methods for parts providing mechanical support or impact resistance as specified in Table T.1		P
	Material properties and test method for electrical insulation of internal wiring as specified in Table T.2		P
8	This clause is not applicable		P

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Clause	Requirement + Test	Result - Remark	Verdict

AA	**ANNEX AA (INFORMATIVE) (IEC 60335-2-40) EXAMPLES FOR OPERATING TEMPERATURES OF THE APPLIANCE**		**P**
BB	**ANNEX BB (NORMATIVE) (IEC 60335-2-40) SELECTED INFORMATION ABOUT REFRIGERANTS**		**P**
CC	**ANNEX CC (INFORMATIVE) (IEC/EN 60335-2-40/AMD1) TRANSPORTATION, MARKING AND STORAGE FOR UNITS THAT EMPLOY FLAMMABLE REFRIGERANTS**		**P**
CC.1	Transport of equipment containing flammable refrigerants (IEC 60335-2-40/AMD1)		P
CC.2	Marking of equipment using signs (IEC 60335-2-40/AMD1)		P
CC.3	Disposal of equipment using flammable refrigerants (IEC 60335-2-40/AMD1)		P
CC.4	Storage of equipment/appliances (IEC 60335-2-40/AMD1)		P
CC.5	Storage of packed (unsold) equipment (IEC 60335-2-40/AMD1)		P
DD	**ANNEX DD (NORMATIVE) (IEC/EN 60335-2-40/AMD1) SERVICE OPERATIONS**		**P**
DD.1	Generals (IEC 60335-2-40/AMD1)		P
DD.2	Symbols (IEC 60335-2-40/AMD1)		P
DD.3	Information in manual (IEC 60335-2-40/AMD1/COR1)		P
DD.4	Information on servicing (IEC 60335-2-40/AMD1)		P
DD.5	Repairs to sealed components (IEC 60335-2-40/AMD1)		P
DD.6	Repair to intrinsically safe components (IEC 60335-2-40/AMD1)		P
DD.7	Cabling (IEC 60335-2-40/AMD1)		P
DD.8	Detection of flammable refrigerants (IEC 60335-2-40/AMD1)		P
DD.9	Leak detection methods (IEC 60335-2-40/AMD1)		P
DD.10	Removal and evacuation (IEC 60335-2-40/AMD1)		P
DD.11	Charging procedures (IEC 60335-2-40/AMD1)		P
DD.12	Decommissioning (IEC 60335-2-40/AMD1)		P
DD.13	Labelling (IEC 60335-2-40/AMD1)		P
DD.14	Recovery (IEC 60335-2-40/AMD1)		P

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Clause	Requirement + Test	Result - Remark	Verdict

EE	**ANNEX EE (NORMATIVE) (IEC/EN 60335-2-40/AMD1) PRESSURE TESTS**		**P**
EE.1	General (IEC 60335-2-40/AMD1)		P
EE.2	Pressure test value determined under testing carried out in clause 11 (IEC 60335-2-40/AMD1)		P
EE.3	Pressure test value determined under testing carried out in clause 19 (IEC 60335-2-40/AMD1)		P
EE.4	Pressure test value determined under testing carried out under standstill conditions (IEC 60335-2-40/AMD1)		P
EE.5	Fatigue test option for Clauses EE.1 and EE.4.1 (IEC 60335-2-40/AMD1)		N/A
FF	**ANNEX FF (NORMATIVE) (IEC/EN 60335-2-40/AMD1) LEAK SIMULATION TESTS**		N/A
FF.1	General (IEC 60335-2-40/AMD1)		N/A
FF.2	Test methods (IEC 60335-2-40/AMD1/COR1)		N/A
GG	**ANNEX GG (NORMATIVE) (IEC/EN 60335-2-40/AMD1) CHARGE LIMITS, VENTILATION REQUIREMENTS AND REQUIREMENTS FOR SECONDARY CIRCUITS**		**P**
GG.1	Requirements for charge limits in ventilated areas (IEC 60335-2-40/AMD1/COR1)	1,1kg <m_1, 1,224kg	P
GG.2	Requirements for charge limits in unventilated areas (IEC 60335-2-40/AMD1/COR1)		N/A
GG.3	Requirements for charge limits in areas with mechanical ventilation (IEC 60335-2-40/AMD1)		N/A
GG.4	Requirements for mechanical ventilation within the appliance enclosure (IEC 60335-2-40/AMD1)		N/A
GG.5	Requirements for mechanical ventilation for rooms complying with ISO 5149 (IEC 60335-2-40/AMD1)		N/A
GG.6	Requirements for refrigeration systems employing secondary heat exchangers (IEC 60335-2-40/AMD1/COR1)		N/A
GG.7	The appliance shall then be tested with a maximum water flow under the conditions described in g) (IEC 60335-2-40/AMD1)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	Δ P	Required Δ P	Remark
At 230V/50Hz Cooling mode	2350	1922	-18,2%	+15%	--
At 230V/50Hz Heating mode	2350	2428	+3,3%	+15%	--
Supplementary information: Cooling mode: 32/23°C(indoor), 38/-°C (outdoor)/Heating mode: 20/-°C (indoor), 7/6°C (outdoor). Tested at most unfavourable ambient condition and highest frequency of compressor motor work condition, most unfavourable were recorded					

10.2	TABLE: Current deviation				P
Current deviation of/at:	I rated (A)	I measured (A)	Δ I	Required Δ I	Remark
At 230V/50Hz Cooling mode	10,68	8,39	-21,4%	+15%	--
At 230V/50Hz Heating mode	10,68	10,58	-0,9%	+15%	--
Supplementary information: Cooling mode: 32/23°C(indoor), 38/-°C (outdoor)/Heating mode: 20/-°C (indoor), 7/6°C (outdoor). Tested at most unfavourable ambient condition and highest frequency of compressor motor work condition, most unfavourable were recorded					

11.8	TABLE: Heating test, thermocouples		P
	Test voltage (V) .....:	206,8 and 254,4	—
	Ambient (°C) .....:	See below	—

Thermocouple locations	T(°C)	Max. T (°C)
Indoor unit		
Fan motor enclosure	38,6	105 (class E)
Terminal for supply	33,6	85
Step motor	34,6	105 (class E)
Relay	37,6	T70
Transformer	43,0	120 (class B)
Interconnection cord	42,1	75
X2	36,9	T100
Outlet air	27,3	90

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Clause	Requirement + Test	Result - Remark	Verdict

PCB	37,2	145
VDR	35,8	T85
Y capacitor	33,4	T125
Wi-fi	33,7	For ref.
UV-module	37,2	For ref.
Outdoor unit		
Fan motor enclosure	59,2	110 (class B)
Compressor	76,5	For ref.
Terminal for supply	44,6	85
Supply cord	43,3	75
IPM	59,5	For ref.
Y capacitor	52,8	T125
PTC	47,7	For ref.
Electrolytic capacitor	51,3	T105
4-way valve	53,8	110 (class A)
Internal wire	58,3	75
Reactor	81,4	200 (class N)
Switching transformer	50,3	120 (class B)
X2 capacitor	48,8	T100
Relay for compressor	54,4	T70
Relay	46,9	T70
PCB	45,8	145
Supplementary information: Cooling mode: 32/23°C(indoor), 38/-°C (outdoor)/ 32/23°C(indoor), 43/-°C (outdoor); Heating mode: 20/-°C (indoor), 2/1°C (outdoor)/ 27/19°C(indoor), 24/-°C (outdoor)		

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Clause	Requirement + Test	Result - Remark	Verdict

11.8	TABLE: Heating test, resistance method					P
	Test voltage (V) .....:	206,8 and 254,4				—
	Ambient, t1 (°C).....:	See below				—
	Ambient, t2 (°C).....:	See below				—
Temperature rise of winding		R1 (Ω)	R2 (Ω)	T (°C)	Max. T (°C)	Insulation class
Compressor		2,083 (At 23°C)	2,715 (At 7°C)	101	140	synthetic insulation
Step motor		497,2 (At 23°C)	547,7 (At 43°C)	49	100	A
4-way valve		2075 (At 23°C)	2486 (At 43°C)	74	115	E
Reactor		0,258 (At 23°C)	0,334 (At 43°C)	99	185	200
Supplementary information: Cooling mode: 32/23°C(indoor), 38/-°C (outdoor)/ 32/23°C(indoor), 43/-°C (outdoor); Heating mode: 20/-°C (indoor), 2/1°C (outdoor)/ 27/19°C(indoor), 24/-°C (outdoor)						

13.2	TABLE: Leakage current		P
	Heating appliances: 1,15 x rated input (W).....:	--	—
	Motor-operated and combined appliances: 1,06 x rated voltage (V).....:	254,4	—
Leakage current between		I (mA)	Max. allowed I (mA)
L/N – earthing metal enclosure		1,20	3,5 mA
L/N – plastic enclosure		0,18 peak	0,35 mA peak
Supplementary information: \			

13.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
L/N – earthing metal enclosure		1000	No
L/N – supplementary insulation		1750	No
L/N – plastic enclosure		3000	No
Supplementary information: \			

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Clause	Requirement + Test	Result - Remark	Verdict

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

16.2	TABLE: Leakage current		P
	Single phase appliances: 1,06 x rated voltage (V) .....:	254,4	—
	Three phase appliances 1,06 x rated voltage divided by √3 (V) .....:	-	—

Leakage current between	I (mA)	Max. allowed I (mA)
L/N – earthing metal enclosure	1,31	3,5 mA
L/N – plastic enclosure	0,01	0,25 mA
Supplementary information: \		

16.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
L/N – earthing metal enclosure		1250	No
L/N – supplementary insulation		1750	No
L/N – plastic enclosure		3000	No
Supplementary information: \			

17	TABLE: Overload protection		P
Thermocouple locations		Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)
For Indoor Unit			
Transformer winding (BCK-25-1989 /BK-19-1989)		83°C	175°C

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Clause	Requirement + Test	Result - Remark	Verdict

Transformer winding (DB26-00146A)	81°C	175°C
Transformer winding (SANHE-19-195)	84°C	175°C
Wire in SELV	13	65
For outdoor Unit		
Transformer winding (BK-19-0030)	78°C	175°C
Transformer winding (DA26-00021A)	81°C	175°C
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)	Δ T (K)	T (°C)	Max. T (°C)
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

19	Abnormal operation conditions						P
Operational characteristics		**YES/NO**	**Operational conditions**				
Are there electronic circuits to control the appliance operation?		Yes	All conditions considered				
Are there “off” or “stand-by” position?		Yes	All conditions considered				
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	See below table			N.A			P
19.3	See below table						P
19.4		Same as 19.3					P
19.5	See below table						P
19.6				N.A			N.A
19.7	See below table						P
19.8							N.A
19.9							N.A
19.10	See below table						P
19.11.2	Electronic parts on PCB, open or shorted	Working or not working, no hazard	NA	NA	NA	NA	P
19.11.4.8							N.A
19.10.101	Heating element always worked	until steady condition established					P
Supplementary information:							

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Clause	Requirement + Test	Result - Remark	Verdict

19.2	**Abnormal operation conditions – locked rotor test other than motor-compressors**		P
	Ambient, t1 (°C):	23°C	—
	Ambient, t2 (°C):	23°C	—
	Test voltage (V) :	240 V	—

Temperature limit T of winding:	R_1 (Ω)	R_2 (Ω)	Measured T (°C)	Limit T (°C)	Insulation class
Indoor fan motor winding (ZWK465A00411)	/	/	33	165	E
Indoor fan motor enclosure (ZWK465A00411)	/	/	32	150	\
Indoor fan motor winding (WZD-40D)	/	/	56	165	E
Indoor fan motor enclosure (WZD-40D)	/	/	42	150	\
Out fan motor winding (YMA060BH01S7)	/	/	35	175	B
Out fan motor enclosure (YMA060BH01S7)	/	/	30	150	\
Out fan motor winding (WZD-A01060L-01A)	/	/	38	175	B
Out fan motor enclosure (WZD-A01060L-01A)	/	/	32	150	\
Supplementary information: 1) The programmable protective device was rendered inoperative. The power input and the control input were adjusted to input normally. The IC as the internal protective device shut off the current to the windings periodically, and the test was made for 15 days. Then the IC was made ineffective, and the IC was broken to open the circuit.					

19.2	**TABLE: electric strength measurements after 72 hours**		P
Test voltage applied between:		Test voltage (V)	Breakdown Yes / No
Leads and enclosure/rotor		1250	No

19.2	**TABLE: leakage current measurements after 72 hours**		P
	A voltage equal to twice the rated voltage (V) :	620	—
Leakage current I between :		I (mA)	Required I (mA)
L/N and enclosure		Max. 0,2	2

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Clause	Requirement + Test	Result - Remark	Verdict

19.3	**Abnormal operation conditions – Locked rotor test motor-compressor**		P
	Motor-compressor ..... :	GTD130UKSF6JV8B	
	Start device ..... :	\	
	Protector ..... :	\	
	Start capacitor ..... :	\	
	Run capacitor ..... :	\	
	Cooling; (static); (fan-m^3/h); (oil); ..... :	\	
	Thermal motor-protection system ..... :	\	

	Self-resetting				Manually reset
Rated voltage	Vn max (V)			Vn max (V)	Vn min (V)
	After 72 h	After 288 h	After 360 h	After 363 h	After 50 cycles
High-voltage test (see 16.3)	Pass				
Leakage current (mA) (see 16.2)	0,43				
Electric strength (see 13.3)	Pass				
Room temperature (°C) (20 ± 5°C)	23,0				
Number of cycles (≥ 2000 or 50)	\	\	\	\	
Housing temperature (°C) (≤ 150°C)	28,9	27,8	27,6	27,1	

supplementary information: The programmable protective device was rendered inoperative. The IPM shut off the current to the compressor. After 50 time connected and disconnected cycle, then the protective electronic circuit was made inoperative and the IC (IPM1) was broken to open the circuit.

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Clause	Requirement + Test	Result - Remark	Verdict

19.5-19.9	Abnormal operation conditions	P
Subclause	Effect	Verdict
19.5	Air-inlet and outlet of outdoor unit/indoor unit were blocked in cooling mode/heating mode, and the programmable protective devices were made inoperative. The IPM module shut off the current to the compressor. Then this protective electronic circuit was made inoperative. The invert module was broken to open the circuit.	P
19.6		N/A
19.7	Worked in cooling mode and outdoor: 53/31°C, indoor:42/23°C (The programmable protective devices were made inoperative) Worked in heating mode and outdoor: -20/-°C, indoor:10/-°C (The programmable protective devices were made inoperative) Worked to steady condition established	P
19.8		N/A
19.9		N/A
Supplementary information:		

19.10	Abnormal operation conditions	P
Failure description	Effect	Verdict
Outdoor fan not worked in cooling mode (The programmable protective devices were made inoperative)	The IPM module shut off the current to the compressor. Then this protective electronic circuit was made inoperative. The invert module was broken to open the circuit	P
Indoor fan not worked in heating mode (The programmable protective devices were made inoperative)	Same as above	P
Supplementary information: \		

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Clause	Requirement + Test	Result - Remark	Verdict

19.14	TABLE: Abnormal operation, temperature rises	
Thermocouple locations	Max. temperature rise measured, Δ T (K)	Max. temperature rise limit, Δ T (K)
IPM for compressor	122°C	For ref.
Power cord	66 °C	For ref.
Terminal	62°C	For ref.
Heating element sur.	310°C	548°C
Supplementary information: \		

21.1	TABLE: Impact resistance		P
Impacts per surface	Surface tested	Impact energy (Nm)	Comments
3	Grilles for the fans	0,5	P
3	Enclosure of outdoor unit	0,5	P
3	Enclosure of indoor unit	0,5	P
Supplementary information: \			

24.1	TABLE: Components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1)]
Terminal block	Changzhou Kaidu Electrical Co., Ltd.	JXW/JX/JXG Series	AC 600V, 4,0mm²	EN 60998-1 EN 60998-2-1	VDE 40042595
Alternative	Nantong Huaguan Electric Co., Ltd	JXW/JX/JXO Series	AC 600V, 4,0mm²	EN 60998-1 EN 60998-2-1	VDE 40013197
Alternative	Zhenjiang Honglian Electrician Co., Ltd.	JX Series	AC 600V, 4,0mm²	EN 60998-1 EN 60998-2-1	VDE 40044499
Alternative	Foshan Shunde Yuanfeng Metal Electrical Appliances Co.,Ltd.	YF2004A	AC 600V, 4,0mm²	EN 60998-1 EN 60998-2-1	TUV R 50425702
Power Cord	Guangdong Rifeng Electrical Cable Co., Ltd.	H07RN-F	450/750V, 3G 1,5 mm²	EN 50525 -2-21	VDE 40015999

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	Weihai Honglin Electronic Co., Ltd.	H07RN-F	450/750V, 3G 1,5 mm²	EN 50525 -2-21	VDE 40031965
Alternative	Guangdong Huasheng Electrical Appliances Co., Ltd	H07RN-F	450/750V, 3G 1,5 mm²	EN 50525 -2-21	VDE 40016788
Alternative	Yangzhou Huasheng Electronics Industrial Co., Ltd	H07RN-F	450/750V, 3G 1,5 mm²	EN 50525 -2-21	VDE 40030537
Interconnection Cord	Guangdong Rifeng Electrical Cable Co., Ltd.	H07RN-F	450/750V, 4x1,0 mm²	EN 50525 -2-21	VDE 40015999
Alternative	Weihai Honglin Electronic Co., Ltd.	H07RN-F	450/750V, 4x1,0 mm²	EN 50525 -2-21	VDE 40031965
Alternative	Guangdong Huasheng Electrical Appliances Co., Ltd	H07RN-F	450/750V, 4x1,0 mm²	EN 50525 -2-21	VDE 40016788
Alternative	Yangzhou Huasheng Electronics Industrial Co., Ltd	H07RN-F	450/750V, 4x1,0 mm²	EN 50525 -2-21	VDE 40030537
Internal wire	Hefei Deren Electronic Device Co., Ltd.	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E338621 + Test with appliance
Alternative	Qingdao Riken Wire & Cable Co., Ltd	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E212103 + Test with appliance
Alternative	CHINA LONSID ELECTRIC CO., LTD.	UL1015 UL3173 UL3272	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E205056 + Test with Appliance
Alternative	Weihai Honglin Electronic Co., Ltd	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E239426 + Test with appliance
Alternative	Xinya Electronic Co., Ltd.	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E170689 + Test with appliance

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	TITION ELECTRIC WIRE GROUP CO., LTD.	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E216894 + Test with appliance
Alternative	ZHEJIANG YUEQING XINGDA ELECTRONICS WIRE&CABLE CO.,LTD.	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E187208 + Test with appliance
Alternative	WENZHOU HU TAI ELECTRIC WIRE&CABLE CO.,LTD.	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E238824 + Test with appliance
Alternative	LTK ELECTRIC WIRE (HUIZHOU) LTD	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E148000 + test with appliance
Alternative	JIANGYIN JIANGZHOU COPPER PRODUCT CO LTD	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E341212 + test with appliance
Alternative	ZHEJIANG LONDA ELECTRONIC WIRE & CABLE CO LTD	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E205056 + test with appliance
Alternative	TAIZHOU RISHUN ELECTRIC APPLIANCE DEVELOPMENT CO LTD	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E237675 + test with appliance
Alternative	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL COLTD	UL1015 UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	UL E227566 + test with appliance
Alternative	LINOYA ELECTRONIC TECHNOLOGY CO., LTD.	UL1015, UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Dongguan Linoya Wire & Cable CO., LTD.	UL1015, UL3173	14, 16, 18, 20, 22, 26AWG	EN 60335-1 EN 60335-2-40	Test with appliance
Critical component on outdoor unit					

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Clause	Requirement + Test	Result - Remark	Verdict

Compressor	SHANGHAI HIGHLY ELECTRICAL APPLIANCES CO., LTD	GTD130UKSF6JV8B	d.c 220V, 600-7200r/min, R32 winding: 1.93Ω at 20°C	EN 60335-1 EN 60335-2-40	Test with appliance
Outdoor fan motor	Jeamo Motor Co,.Ltd.	YMA060BH01S7	DC310V,40W,Class B plastic packaging type	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Wolong Electric (Jinan) Motor Co., Ltd.	WZD-A01060L-01A	DC 310V,60W,Class B plastic packaging type	EN 60335-1 EN 60335-2-40	Test with appliance
4-way valve	Zhejiang Dun'an Artificial Environment Co., Ltd.	DSF-9	AC 220-240V, 7/5W, IP54	EN 60730	VDE 40013212
Alternative	Zhejiang Sanhua Intelligent Controls Co., Ltd	SHF-7H-34U-P/SHF-4-10L3	AC 220-240V, 4,5/3,5W	EN 60730	VDE 40048077
Alternative	ZHONGSHAN CITY GANGLI REFRIGERATION FITTINGS CO.,LTD.	SHF-7	AC220-240V, 50/60Hz, 4,5/3,5W	EN 60730	VDE 40026249
Alternative	OKAYAMA SEIKO (ZHONG SHAN) CO.,LTD.	DSF-C7-34-1	AC220~240V, 4,5/3,5W, 50/60Hz, IP54	EN 60730	VDE 40044501
Reactor	Nantong DPC Electronics Co., Ltd.	DPC1852A-PR	18A/5,2mH, Class N	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Qingdao Yunlu Energy Technology Co., Ltd.	R1805HRA	18A/5,2mH, Class N	EN 60335-1 EN 60335-2-40	Test with appliance
Outdoor control PCB	Chearihi (Anhui) Technology Co., Ltd.	0011801039E	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Shenzhen H&T Intelligent Control Co., Ltd.	0011801039E	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Qingdao Haier Intelligent Electronics Co., Ltd.	0011801039E	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance

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Alternative	Ruking Emerson Climate Technologies (Shanghai) Co., Ltd.	0011801039E	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Guangdong Shangyan Electronic Technology Co., Ltd.	0011801039E	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Hefei Huntkey Electronic Technology Co., Ltd.	0011801039E	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Critical component on indoor unit					
Indoor fan motor	ZHONGSHAN BROAD-OCEAN MOTOR CO., LTD.	ZWK465A00411	DC310V, 40W, Class E	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Wolong Electric (Jinan）Motor Co., Ltd.	WZD-40D	DC310V, 40W, Class E	EN 60335-1 EN 60335-2-40	Test with appliance
Step motor	Changzhou Leili Electronics Co., Ltd.	20BYJ46 24BYJ48	DC 12V	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Jiangsu Huayang Electric Co., Ltd	20BYJ46 24BYJ48	DC 12V	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Changzhou Oukai Electric Co., Ltd	20BYJ46 24BYJ48	DC 12V	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Hefei Huilipu motor Co., Ltd.	20BYJ46 24BYJ48	DC 12V	EN 60335-1 EN 60335-2-40	Test with appliance
WIFI module (optional)	JiangSu Fulian Communication Technology Co., Ltd.	ESP32-for-Haier	5VDC; 300mA	EN 300 328	SGS CE No. SHEM200500402601CRC
Alternative	HANGZHOU TUYA INFORMATION TECHNOLOGY CO., LTD.	HEWRQU1	5VDC; 300mA	EN 300 328	TÜV SUD CE No. T8A1047310037

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	Qingdao Haier Intelligent Home Appliance Technology Co., Ltd.	MK-QTWIFI-04(B)	5VDC; 300mA	IEC 60950-1 IEC 62311 IEC 60335-2-40	Test with appliance & 170418001EMC-1, 170418001RFC-1, 170418001RFC-2, 1611290530SAF-1
Alternative	Qingdao Haier Technology Co., Ltd.	MK-QTWIFI-04(B)	5VDC; 300mA	IEC 60950-1 IEC 62311 IEC 60335-2-40	Test with appliance & 171204006 171204006RFC-1, 171204006RFC-2, 171204006EMC-1, 171204006SAF-1
UVC Sterilization Module	Xiamen Guangpu Electronics Co., Ltd.	0011012908	DC12V, 1,2W	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Shenzhen Biosun Environment Protection and Technology Co., Ltd	0011022283A	DC12V, 1.3±0.1W	EN 60335-1 EN 60335-2-40	Test with appliance
Indoor control PCB	COSMO AIoT Technology Co., Ltd Qingdao Lingzhi Electronic Technology Co., Ltd	0011801123B	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Shenzhen H&T Intelligent Control Co., Ltd.	0011801123B	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Chearihi (Anhui) Technology Co., Ltd	0011801123B	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Ruking Emerson Climate Technologies (Shanghai) Co., Ltd.	0011801123B	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance

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Alternative	Guangdong Shangyan Electronic Technology Co., Ltd.	0011801123B	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Hefei Huntkey Electronic Technology Co., Ltd.	0011801123B	AC 220-240V, 50Hz	EN 60335-1 EN 60335-2-40	Test with appliance
Critical component on PCB					
IPM module	Infineon Technologies China Co., Ltd.	IKCM20L60GD	600V, 20A	EN 60335-1 EN 60335-2-40	Test with appliance
Outdoor transformer	Qingdao Jingshi Electronic Co.,Ltd.	BK-19-0030	Input: AC 90-264V~, 50/60Hz Output: DC 7V; 12V Class B	EN 61558-1 EN 61558-2-16	VDE 40037839
Alternative	Wuxi Derun Electron Co.,Ltd.	DA26-00021A	Input: AC 85-240V~, 50/60Hz Output: DC 7V; 12V Class B	EN 61558-1 EN 61558-2-16	TUV B161086890003
Indoor transformer	Qingdao Jingshi Group Co., Ltd.	BCK-25-1989 BK-19-1989	Input: AC 85-265V, 50Hz, Output: DC 12V, class B	EN 61558-1 EN 61558-2-16	VDE 40037839
Alternative	Wuxi Derun Electron Co.,Ltd.	DB26-00146A	Input: AC 85-240V~, 50/60Hz Output: DC 12V Class B	EN 61558-1 EN 61558-2-16	TUV B161086890003
Alternative	Dezhou Sanhe Electric Co.,Ltd.	SANHE-19-195	Input: AC 90-245V~, 50/60Hz Output: DC 12V Class B	EN 61558-1 EN 61558-2-16	VDE 40029326
X2 Capacitor	Xiamen Faratronic Co., Ltd.	MKP61	AC 275V or AC 305V, 40/110/56/B, 0,01µF, 0,1µF, 0,22µF, 0,47µF, 1,0µF, 2,2µF	EN 60384-14	VDE 40007424
Alternative	Xiamen Faratronic Co., Ltd.	MKP62	AC 275V or AC 305V, 40/110/56/B 0,01µF, 0,1µF, 0,22µF, 0,47µF, 1,0µF, 2,2µF	EN 60384-14	VDE 40000358
Alternative	Nistronics (Jiangxi) Co., Ltd.	MPR	AC 275V or AC310V 40/110/56/B, 40/100/21/B, 0,01µF, 0,22µF, 0,1µF, 0,47µF, 1,0µF, 2,2µF	EN 60384-14	VDE 40032056

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Alternative	JIMSON ELECTRONICS (XIAMEN) CO., LTD.	MKP	AC 275V, 40/100/ 21/B, 0,01µF, 0,22µF, 0,1µF, 0,47µF, 1,0µF, 2,2µF	EN 60384-14	VDE 40000463
Alternative	TDK (Zhuhai FTZ) Co., Ltd.	B3292# series	AC 305V, 40/105/ 56/B, 0,01µF, 0,1µF, 0,47µF, 1,0µF, 2,2µF	EN 60384-14	VDE 40010694
Alternative	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	AC 275V, 40/110/ 56/B, 0,01µF, 0,22µF, 0,1µF, 0,47µF, 1,0µF, 2,2µF	EN 60384-14	VDE 40024534
Alternative	Guangdong Fengming Electronic Tech.Co.,Ltd	MKP-X2	AC275V, 40/105/ 21/C , 0,01µF, 0,1µF, 0,47µF, 1,0µF, 2,2µF	EN 60384-14	VDE 40025702
Y Capacitor	TDK Corporation	CD	AC 250V, 25/125/ 21/B, Y1, 2200pF/ 4700pF/10000pF	EN 60384-14	VDE 40017931
Alternative	TDK Corporation	CS	AC 250V, 25/125/ 21/B, Y2, 2200pF/ 4700pF/10000pF	EN 60384-14	VDE 40029781
Alternative	Yinan Don's Electronic Component Co., Ltd.	CT81	AC 250V, 25/125/ 21/C, Y2/Y1, 2200pF/4700pF/100 00pF	EN 60384-14	VDE 135256
Alternative	Capatronic Electronics (Kunshan) Co., Ltd.	Y5V orY5P or Y5U	AC 250V, 20/125/ 21/C, Y1,Y2, 2200pF/4700pF/100 00pF	EN 60384-14	VDE 40013317
Alternative	Murata Mfg. Co., Ltd.	KY	AC 250V, 40/125/ 21/C, Y2, 2200pF/4700pF/100 00pF	EN 60384-14	VDE 40006273
Alternative	Guangdong Fenghua Advanced Technology Holding CO., LTD.	CT7	AC 250V, 20/125/ 21/C, Y2, 2200pF/4700pF/100 00pF	EN 60384-14	VDE 40013869
Alternative	Murata Mfg. Co., Ltd.	KX	AC 250V, 40/125/ 21/B, Y2, 2200pF, 4700pF, 10000pF	EN 60384-14	VDE 40002831

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Alternative	Walsin Technology Corp.	AC	AC 250V, 40/125/ 21/C,Y2, 2200pF, 4700pF, 10000pF	EN 60384-14	VDE 40001829
Alternative	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CE	AC 250V, 40/125/ 21/B,X1 Y2, 2200pF, 4700pF, 10000pF	EN 60384-14	VDE 40025748
Alternative	Walsin Technology Corp.	AH	AC 250V, 40/125/ 21/B,Y2, 2200pF, 4700pF, 10000pF	EN 60384-14	VDE 40001804
Alternative	Nistronics (Jiangxi) Co., Ltd.	MPY	AC 250V, 40/125/ 21/B,Y2, 2200pF, 4700pF, 10000pF	EN 60384-14	VDE 40039835
Alternative	Xiamen Faratronic Co.,Ltd.	MKP63	AC 250V, 40/125/ 21/B,Y2, 2200pF, 4700pF, 10000pF	EN 60384-14	SE/0366-2D
Fuse 1 on outdoor control PCB	Suzhou Littelfuse OVS Ltd.	325/326 Series 0325025.MXP	AC 250V, T25A or T20A, ceramics type	EN 60335-1- EN 60335-2-40	UL E10480 + test with appliance
Alternative	CHI LICK SCHURTER LTD	SUT 6.3x32 SUT8020.0606. 1.PT	AC 250V, T25A or 20A, ceramics type	EN 60335-1- EN 60335-2-40	UL E184831 + test with appliance
Alternative	Sun Electric.CO	6EP/6SP/6HP	AC 250V, T25A or 20A, ceramics type	EN 60335-1- EN 60335-2-40	UL E166522 + test with appliance
Alternative	Dongguan Better Electronic Technology Co.,Ltd.	614	AC 250V, T25A or T20A, ceramics type	EN 60335-1- EN 60335-2-40	UL E300003 + test with appliance
Alternative	Dongguan Cooper Electronics Co.,Ltd.	612	AC250V T20A or 25A	EN 60127-1	VDE 400122052
Alternative	Suzhou Walter Electronic Co., Ltd.	MTP	AC250V T20A or 25A	EN 60127-1	TUV R J 50305728
Fuse 2 on indoor control PCB	Suzhou Littelfuse OVS Ltd.	215 Series	AC 250V, T3,15A, ceramics type	EN 60127-1 EN 60127-2	VDE 40013521
Alternative	Sun Electric Co.	5H	AC 250V, T3,15A, ceramics type	EN 60127-1 EN 60127-2	TUV J 50220933

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Alternative	Suzhou Walter Electronic Co., Ltd.	TSC	AC 250V, T3,15A, ceramics type	EN 60127-1 EN 60127-2	VDE 40016670
Alternative	Dongguan Better Electronic Technology Co., Ltd.	524	AC 250V, T3,15A, ceramics type	EN 60127-1 EN 60127-2	VDE 40025424
Alternative	CONQUER ELECTRONICS CO., LTD.	MST Series	T1A or 3,15A, 250V	EN 60127-1 EN 60127-2	TUV R 50176525
Alternative	DongGuan Better Electronic Co., Ltd.	932 Series	T1A or 3,15A, 250V	EN 60127-1 EN 60127-2	VDE 40033369
Alternative	Suzhou Littelfuse OVS Ltd.	392 Series	T1A or 3,15A, 250V	EN 60127-1 EN 60127-2	VDE 126983
Alternative	Walter Electronic Co., Ltd.	2010 Series	T1A or 3,15A, 250V	EN 60127-1 EN 60127-2	TUV J 50305728
Relay 1	Xiamen Hongfa Electroacoustic Co., Ltd	HF102F/12VD C(310)(335)	AC 250V, DC12V, 10E4, 20A, 40T85, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	VDE 40024142 PS 64.105.16.001 59.01
Alternative	Zhejiang Meishuo Electric Technology Co.,LTD	MPY-S-112-A	AC 250V DC12V 10E4 20A 40T105, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV R50204088 AK 50410083
Alternative	Huangshan Wangrong Electronics Co.,Ltd.	RF-SS-112DMF	AC 250V DC12V 10E4 20A 40T85 Explosion proof type	EN 61810-1	TUV R 50194013 PS 64105150154 803
Alternative	Sanyou Corporation Limited	SFK-112DM	AC 250V DC12V 10E4 20A 40T85, Explosion proof type	EN 61810-1	TUV R 50138321 TUV AK 50464382
Alternative	Xiamen Hongfa Electroacoustics Co., Ltd.	HF161F/12-H(310)(335)	AC 250V DC12V 10E4 20A 40T85 Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	VDE 40031410 PS 64.105.15.052 41.01
Alternative	Zhejiang Meishuo Electric Technology Co., Ltd.	MPY-S-112-A-P	AC 250V DC12V 10E4 20A 40T105 Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV R 50204088 TUV AK 50410083

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	Huangshan Wangrong Electronics Co., Ltd.	RF-SS-112DM	AC 250V DC12V 10E4 20A 40T85 Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV R 50194013 PS 64105150154803
Alternative	Sanyou Corporation Limited	SFK-112DMP-F	AC 250V DC12V 10E4 20A 40T85 Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV R 50138321 TUV AK 50464382
Alternative	Shanghai Song Chuan Precision Electron Co.,Ltd.	891WP-1A-S	AC 250V DC12V 10E4 20A 30T70 Explosion proof type	EN 61810-1	TUV R50003966
Alternative	Shanghai Song Chuan Precision Electron Co.,Ltd.	891P-1A-S	AC 250V DC12V 10E4 20A 40T85 Explosion proof type	EN 61810-1	TUV R50003966
Alternative	Tyco Electronics (Shenzhen) Co., Ltd.	PCF-112D2M	AC 250V DC12V 10E4 20A 40T85 Explosion proof type	EN 61810-1	VDE 40012548
Relay 2	Xiamen Hongfa Electroacoustic Co., Ltd	HF33F/012-ZS(310)(335)	AC 250V, DC12V, 5A, 7.5E4,40T70, Explosion proof type	EN 61810-1	VDE 125661
Alternative	Omron Corporation	G5NB-1A4	AC 250V, DC12V, 5A, 10E4,40T85, Explosion proof type	EN 61810-1	VDE 137575
Alternative	Xiamen Hongfa Electroacoustic Co., Ltd	HF46F/12-HS1(310)(335)	AC 250V, DC12V, 10E4, 5A, 40T85, Explosion proof type	EN 61810-1	VDE 40025215
Alternative	Zhejiang Meishuo Electric Technology Co.,LTD.	MPR-S-112-A	250VAC, DC12V, 10E4, 5A, T85, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV R 50217035 TUV AK 50396773
Alternative	Tyco Electronics (shenzhen) Co., Ltd	PCJ-112D3MH-WG	250VAC, DC12V, 10E4, 5A, T85, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	VDE 40009151 TUV AK 50434362
Alternative	Xiamen Hongfa Electroacoustic Co., Ltd.	HF32F/012-HS(310)(335) HF32FV/012-HSTF(310)(335)	AC 250V, DC12V, 10E4, 5A, T70, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	VDE 40012204 TUV R 50037929 PS 64.105.16.02325.01
Alternative	Zhejiang Meishuo Electric Technology Co., LTD	MPD-S-112-A	AC 250V, DC12V, 10E4, 5A, T105, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV R 50184948 AK 50396767

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Alternative	Xiamen Hongfa Electroacoustic Co., Ltd	HF33F/012-HSL(310)(335)	250VAC, DC12V, 7,5E4, 5A, T85, Explosion proof type	EN 61810-1	VDE 125661
Alternative	Tyco Electronics (shenzhen) Co., Ltd	OJE-SH-112DM	250VAC, DC12V, 10E4, 5A, T85, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	VDE 40007630 TUV AK 50439949
Alternative	Wangrong Electronics (Shenzhen) Co., Ltd.	RJ-SS-112DM-S	250VAC, DC12V, 10E4, 5A, T85, Explosion proof type	EN 61810 EN 60079-15	TUV R 50222701 CNEx19.1007 U
Alternative	Shanghai Song Chuan Precision Electron Co.,Ltd.	307-1AH-V/H/S-307-1AH-F-C/V/S	AC 250V, DC12V, 10E4, 5A, 40T85, Explosion proof type	EN 61810-1	VDE 40028236
Alternative	OMRON Corporation	G5Q-1A4-HA	AC 250V, DC12V, 10E4, 5A, 40T85, Explosion proof type	EN 61810-1	VDE 40009467
Alternative	Zhejiang Meishuo Electric Technology Co., Ltd.	MPDN-S-112-C	AC 250V, DC12V, 10E4, 5A, 40T85, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV R 50403369 AK 0461279
Alternative	WangRong Electronics (Shenzhen) Co. Ltd.	RJE-112D-S	AC277V/250V, DC12V, 10E4, 5A, 40T85, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	TUV D 1053700003
Alternative	Xiamen Hongfa Electroacoustic Co., Ltd	HF32F-G	AC 250VAC DC12V 10E4 5A 40T105, Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	PS 64.105.16.023 25.01
Alternative	Sanyou Corporation Limited	SJ-SH-112DM2	AC 250V DC12V 10E4 5A 40T85 Explosion proof type	EN 61810-1	VDE 40002146
Alternative	Huangshan Wangrong Electronics Co.,Ltd.	RJE-112LM-S	AC 277V DC12V 10E4 5A 40T85 Explosion proof type	EN 61810-1	VDE 40045973
Alternative	Sanyou Corporation Limited	SJE-SH-112LM2	AC 277V DC12V 10E4 5A 40T85 Explosion proof type	EN 61810-1	VDE 40035912
Alternative	Omron Electronic Components(Shenzhen) Ltd.	G5NB-1A4-E-HA	AC 250V DC12V 10E4 5A 40T85 Explosion proof type	EN 61810-1 EN 60079-0 EN 60079-15	VDE 137575 TUV AK 50462971
Alternative	Huangshan Wangrong Electronics Co., Ltd.	RC-112DM1H	AC 250V DC12V 10E4 5A 40T85 Explosion proof type	EN 61810-1	VDE 40034781

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Alternative	Sanyou Corporation Limited	SRB-SH-112DM2	AC 250V DC12V 10E4 5A 40T85 Explosion proof type	EN 61810-1	VDE 40033402
Alternative	Sanyou Corporation Limited	SJE-SH-112D2	AC250V, DC12V, 10E4 5A 40T105 Explosion proof type	EN 61810-1	VDE 40035912
Optocoupler	Toshiba Electronic Devices & Storage Corporation	TLP351	890V peak; T85; Cr.& Cl.>=7,0mm	EN 60747	VDE 40011913
Alternative	Toshiba Electronic Devices & Storage Corporation	TLP251	890V peak, T85 Cr. & Cl.>=7,0mm	EN 60747	VDE 40011913
Alternative	Lite-on Technology Corporation	LTV-817	890V peak, T110 Cr.&Cl.>=7,0mm	EN 60747	VDE 40015248
Alternative	Lite-on Technology Corporation	LTV-851	890V peak, T115, Cr.&Cl.>=7,0mm	EN 60747	VDE 40015248
Alternative	Lite-on Technology Corporation	LTV-3150 LTV-3150-L	1140V peak, T115,Cr. & Cl. >=7,0mm	EN 60747	VDE 40027788
Alternative	Everlight Electronics Co., Ltd.	EL817	850V peak, 55/110/21,T110 Cr. & Cl.>=7,6mm	EN 60747	VDE 132249
Alternative	Everlight Electronics Co., Ltd.	EL851	850V peak, T100 Cr. & Cl.>=7,6mm	EN 60747	VDE 132249
Alternative	Fairchild Semiconductor Pte Ltd	FOD3150	890V peak, 40/110/21, Cr. & Cl.>=7,0mm	EN 60747	VDE 40018398
Alternative	Sharp Corporation Electronic Components Group	PC 817 PC 851	890V peak, 55/110/21, Cr. & Cl.=6,4mm	EN 60747	VDE 40008087
Alternative	Sharp Corporation Electronic Components Group	PC 725V	890V peak, 55/100/21, Cr.&Cl.>=6.4mm	EN 60747	VDE 40008189
Alternative	Toshiba Electronic Devices & Storage Corporation	TLP628	890V peak, 55/100/21, Cr.&Cl.>=7,0mm	EN 60747	VDE 40009302
Alternative	Toshiba Electronic Devices & Storage Corporation	TLP388	1230V peak, T125, Cr. & Cl.>=8,0mm	EN 60747	VDE 40040216
Alternative	Shenzhen Orient Components Co. Ltd.	ORPC-817	850V peak; T110; Cr. & Cl.>=7,6mm	EN 60747	VDE 40029733

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Alternative	Shenzhen Orient Components Co. Ltd.	ORPC-851	850V peak; T110; Cr. & Cl.>=7,6mm	EN 60747	VDE 40029733
Varistor	TDK Electronics GmbH & Co OG	S14K350	560V, 40/85/56	IEC 61051	VDE 40027582
Alternative	TDK Electronics GmbH & Co OG	S14K385K1	620V, 40T125	IEC 61051	VDE 40027582
Alternative	Tyco Electronics Corporation	ROV14 -561K	560V, 40/85/56	IEC 61051	VDE 40006997
Alternative	Thinking Electronic Industrial Co., Ltd.	TVR14561K	560V, 40/85/56	IEC 61051	VDE 005944
Alternative	Thinking Electronic Industrial Co., Ltd.	TVR14471K	470V, 40/85/56	IEC 61051	VDE 005944
Alternative	Thinking Electronic Industrial Co., Ltd.	TVR14621* TVR14621V TVR14621K	620V, 40/85/56	IEC 61051	VDE 005944
Alternative	Chengdu Tieda Electronics Corporation	MYN15-621KM	620V, T85	IEC 61051	VDE 40045597
Alternative	Chengdu Tieda Electronics Corporation	14KAC385MS	620V, 40T125	IEC 61051	VDE 40045597
Alternative	Thinking Electronic Industrial Co., Ltd.	TVR14561K	560V, 40T85	IEC 61051	VDE 40021243
PTC on outdoor control PCB	Thinking Electronic Industrial Co., Ltd.	PSB470-07	250V, 47Ω (25°C), Imax 10A	EN 60738	VDE 40017625
Alternative	Thinking Electronic Industrial Co., Ltd.	PSB400-A2C0	250V, 40Ω (25°C), Imax 8A	EN 60738	VDE 40017625
Alternative	Hubei Huagong Gaoli Electronic Co., Ltd.	MZ8II-CH400M	220V, 40Ω (25°C), T85, 1E5, Imax 12A	EN 60738 EN 60730	TUV R 50176237
Alternative	Hubei Huagong Gaoli Electronic Co., Ltd.	MZ8IV-B470N	250V, 47Ω (25°C), T85, 1E5, Imax 10A	EN 60738 EN 60730	TUV R 50176237

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Alternative	ShenZhen AMPRON Technology co., LTD	MZ32-40RMAGD01-EE	250V, 40Ω, Imax 12A	EN 60738-1 EN 60730	TUV R 50441353
Alternative	TDK (Zhuhai FTZ) Co., Ltd.	B59451	250V, 40Ω, Imax 12A	EN 60738-1 EN 60730	VDE 40040539
Alternative	Dandong guotong electronic components Co., Ltd.	MZ9240RN	250VAC; 40Ω; Imax 12A	EN 60738-1 EN 60730	PS B170767733002
Alternative	Thinking Electronic Industrial Co., Ltd.	PSB400M	250VAC; 40Ω; Imax 12A	EN 60738-1 EN 60730	VDE 40017625
Alternative	Thinking Electronic Industrial Co., Ltd.	PSB400MA2B510CGY	250VAC; 40Ω; Imax 12A	EN 60738-1 EN 60730	VDE 40017625
Alternative	Thinking Electronic Industrial Co., Ltd.	PPL20400NA2B7CKL	250VAC; 40Ω; Imax 12A	EN 60738-1 EN 60730	TUV R 50426392
Alternative	ShenZhen AMPRON Technology co., Ltd.	MZ3240R	250VAC; 40Ω; Imax 12A	EN 60738-1 EN 60730	TUV R 50187698
Alternative	Xiaogan Huagong Gaoli Electronic Co., Ltd.	MZ8Ⅳ–B470N	250VAC; 47Ω; Imax 10A	EN 60738-1 EN 60730	TUV R 50176237
Alternative	Thinking Electronic Industrial Co., Ltd.	PSB470N	250VAC; 47Ω; Imax 10A	EN 60738-1 EN 60730	VDE 40017625
Alternative	Dandong guotong electronic components Co., Ltd.	MZ-47R-A	250VAC; 47Ω; Imax 10A	EN 60335-2-40	Test with appliance
Alternative	Xiaogan Huagong Gaoli Electronic Co., Ltd.	MZ8IV-B470M	250VAC; 47Ω; Imax 10A	EN 60738-1 EN 60730	TVU R 50176237
Alternative	ShenZhen AMPRON Technology co., Ltd.	MZ3247R	250VAC; 47Ω; Imax 10A	EN 60738-1 EN 60730	TUV R 50187698
Alternative	MURATA MFG CO., LTD.	PTGL14AS470H0D76AZ	250VAC; 47Ω; Imax 10A	EN 60335-2-40	Test with appliance &UL E137188
PCB material	Changzhou Aohong Electronics Co., Ltd	AOH-2, AOH-3，AOH-4	Rated 1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E303981 +test with appliance

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Alternative	Kunshan Huaxin Circuit Board Co., Ltd.	HXF-S HX-SA HS-3/HXF-M/HXF-AL1/HXF-AL2/HXF-AL4 /HXF-AL3/HX-S(I)	Rated 1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E227809 +test with appliance
Alternative	HT Circuits(Qingdao) Co., Ltd.	1094V0/1194V0/1194V0G/1194V0Z/1294V0 1494V0/1494V0G/2694V0A894V0/894V0G /1594V0/2894V0	Rated 1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E56334 +test with appliance
Alternative	HUIZHOU Glorysky Electronics Co., Ltd	GS-001/GS-004/TC-1/GS*/GS-D1	Rated 1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E257384 +tested with appliance
Alternative	HUAIAN GLORYSKY ELECTRONICS CO LTD	GS-001/GS-004/TC-1/GS*	Rated 1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E257384 +tested with appliance
Alternative	NIPPON (BOLUO) ELECTRONICS CO.,LTD	Q2-3/KB-6160/KB-6160C/D2	Rated 1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E56327 E123995 +tested with appliance
Alternative	Shenzhen Sun&Lynn Circuits Co.,Ltd	SL-D	Rated 1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E234156 +tested with appliance
Alternative	SHANTOU FENGLIDA ELECTRONICS TECHNOLOGY CO.,LTD.	FLD-04, KB-6160/KB-6160C, FLD-02	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E347210+ tested with appliance
Alternative	Jiangxi Xusheng Electronics Co	PWB Type XS-M, XS-D	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E503744+ tested with appliance
Alternative	KUNSHAN JINPENG ELECTRONICS CO.,LTD.	JP-2, JP-1	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E306084+ tested with appliance
Alternative	ANHUI JUKANG ELECTRONICS CO.,LTD.	JK-2	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E472363+ tested with appliance

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Alternative	KUNSHAN DAYANG PRINTED CIRCUIT BOARD CO.,LTD.	DY-M	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E360224+ tested with appliance
Alternative	KUNSHAN YIMAI CIRCUIT BOARD MFR CO.,LTD.	YM-M	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E209202+ tested with appliance
Alternative	Jiangsu H-Fast Electronic Co.,Ltd.	211004	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E507530+ tested with appliance
Alternative	SHENZHEN KECHENGDA TECHNOLOGY CORP LTD	KD-002	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E498693+ tested with appliance
Alternative	Suizhou Kangmei Electronics Co	KM-D1	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E511140+ tested with appliance
Alternative	Changzhou Haihong Electronics Co., Ltd.	KB-6160/KB-6160C	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E166702 + tested with appliance
Alternative	HUIZHOU XINGZHIGUANG TECHNOLOGY CO., LTD	S1600/KB-6160/KB-6160A/S1141/S2126/S2131/KB-6164F/KB-6160C/S1150G/S1000-2M	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E246887 + tested with appliance
Alternative	RONGHUI ELECTRONICS（HUIZHOU）CO., LTD.	RH-3	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E252098 + tested with appliance
Alternative	LongNan Champion Asia Precision Circuit Co., Ltd	KB-6160/KB-6160C	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E342828 + tested with appliance
Alternative	INNO CIRCUITS LIMITED	NY2140/NY1600/KB-6160/KB-6160C/S1141/S1600L/IQE-D1	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E365781 + tested with appliance
Alternative	Jiangxi Ronghui Electronics Co., LTD	RH-4 RH-4HF RH-1 RH-2 RH-3 RH-3HF	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E252098 + tested with appliance

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict

Alternative	HUIZHOU XINGZHIGUANG TECHNOLOGY CO., LTD	XZG-P2 XZG-P3 XZG-P1	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E246887 + tested with appliance
Alternative	LongNan Champion Asia Precision Circuit Co., Ltd	C1 C2 C3 F-H F-M H1 H2 M1 M2 F-M2 D1 D2 D3 F-D F-D1 F-D2	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E342828 + Test with appliance
Alternative	Jiangsu Zhong xin hua Electronic Technology Co., Ltd.	ZXHPCB-D	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E505746 + Test with appliance
Alternative	TEAN ELECTRONIC (DA YA BAY) CO., LTD.	KB6160C/KB6160/ S1600	1,6mm, V-0	EN 60335-1 EN 60335-2-40	UL E358874 + Test with appliance
Discharge tube	OKAYA ELECTRIC INDUSTRIES CO LTD	RA-362MX-V7-Y5-HIS	3600V E322107	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	TDK Elecrtronics	B88069X3813A103	3600V E319264	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Shenzhen Bencent Electronics Co., Ltd.	B5G3600-G	3600V E337906	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	TDK Elecrtronics	B88069X2311T502	3600V E319264	EN 60335-1 EN 60335-2-40	Test with appliance
Alternative	Shenzhen Bencent Electronics Co., Ltd.	B5G3600-F	3600V E337906	EN 60335-1 EN 60335-2-40	Test with appliance
Electric heating element	Zhejiang Dongfang Electric Heating Technology Co., Ltd.	0010401482B KWB-045	220V ~ 50Hz 300W	EN 60335-1 EN 60335-2-40	Test with appliance
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039. [2)] an asterisk indicates a mark which assures the agreed level of surveillance.					

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Clause	Requirement + Test	Result - Remark	Verdict

28.1	**TABLE: Threaded part torque test**		P
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Screws in terminal block	4,0	II	1,2
Screws fixing enclosure	3,8	II	1,2
Supplementary information:			

29.1	**TABLE: Clearances**					P
	Overvoltage category ..... :	II				-
		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic	Supplementary	Reinforced	Functional	Verdict / Remark
330	0,2* / 0,5 / 0,8**					
500	0,2* / 0,5 / 0,8**					
800	0,2* / 0,5 / 0,8**					
1 500	0,5 / 0,8** / 1,0***					
2 500	**1,5 / 2,0*** **	X	X		X	P
4 000	**3,0 / 3,5*** **			X		P
6 000	5,5 / 6,0***					
8 000	8,0 / 8,5***					

Supplementary information:
*) For tracks on printed circuit boards if pollution degree 1 and 2
**) For pollution degree 3
***) If the construction is affected by wear, distortion, movement of the parts or during assembly.

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Clause	Requirement + Test	Result - Remark	Verdict

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

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Clause	Requirement + Test	Result - Remark	Verdict

>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

Supplementary information:

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

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

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Clause	Requirement + Test	Result - Remark	Verdict

250	0,42	1,0	1,4	**2,0**	2,5	2,8	**3,2**	P
400	0,75	1,6	2,2	**3,2**	4,0	4,5	**5,0**	P
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	NA
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	NA
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	NA
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	NA
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	NA
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	NA
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	NA
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	NA
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	NA
Supplementary information: *) Material group IIIb is allowed if the working voltage does not exceed 50 V								

30.1	**TABLE: Ball Pressure Test of Thermoplastics**		P
Allowed impression diameter (mm) ..... :		2,0	-
Object/ Part No./ Material	**Manufacturer/ trademark**	**Test temperature (°C)**	**Impression diameter (mm)**
Enclosure	\	75	1,2
Terminal block	\	125	1,2
Inductor on PCB bobbin	\	125	1,3
Transformer bobbin	\	125	1,1
Connector on PCB	\	125	1,3
Connector	\	125	1,3
Fan motor	\	125	1,1
UVC LED enclosure	\	75	1,1

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**		
Enclosure	\	X						P
Electrical box	\	X						P
Anion Generator	\	X						P

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Clause	Requirement + Test	Result - Remark	Verdict

Plasma iron generator	\	X						P
UVC LED enclosure	\	X						P
WIFI module	\	X						P
Step motor	\				NI	NI	X	P
Terminal block	\				NI	NI	X	P
Inductor on PCB bobbin	\				NI	NI	X	P
Transformer bobbin	\				NI	NI	X	P
Connector on PCB	\				NI	NI	X	P
Connector	\				NI	NI	X	P
Fan motor	\				NI	NI	X	P
Relay	\				NI	NI	X	P
X2 capacitor	\				NI	NI	X	P
Varistor	\				NI	NI	X	P
Reactor	\				NI	NI	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
If no, then surrounding parts passed the needle-flame test of annex E (Yes/No)..... :	N/A
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:

- 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

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Clause	Requirement + Test	Result - Remark	Verdict

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	\	30	Not Ignition	0	P

Supplementary information:

- NFT not relevant (or applicable) for Parts of material classified as V-0 or V-1
- NFT not relevant (or applicable) for Base material of PCBs classified as V-0 or if relevant VTM-0

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 60335-2-40** **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY – PART 2 40: PARTICULAR REQUIREMENTS FOR ELECTRICAL HEAT PUMPS, AIR CONDITIONERS AND DEHUMIDIFIERS			
Differences according to ..... :	EN 60335-2-40:2003 + AC:2006 + A11:2004 + A12:2005 + A1:2006 + A2:2009 + A13:2012 + AC:2013) used in conjunction with EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019 + A15:2021 EN 62233:2008 + AC:2008		
TRF template used..... :	IECEE OD-2020-F2:2020, Ed. 1.1		
Attachment Form No. ..... : **Attachment Originator**..... : **Master Attachment**..... :	EU_GD_IEC60335_2_40R Nemko Group AS 2022-09-16		
Copyright © 2022 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	CENELEC COMMON MODIFICATIONS (EN)		
6.1	Delete “class 0” and “class 01”		N/A
7.1	Single-phase appliances to be connected to the supply mains: 230 V covered		P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
7.12	The instructions include the substance of the following:		-
	- this appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved		P
	- children shall not play with the appliance		P
	- cleaning and user maintenance shall not be made by children without supervision		P
7.12.1	Installation instructions for appliances intended to be permanently connected to fixed wiring, and have leakage current exceed 10 mA, state that installation of residual current device (RCD) having rated residual operating current not exceeding 30 mA is advisable (EN 60335-2-40)		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliances not accessible to the general public and which are intended to be permanently connected to fixed wiring and which may have leakage currents exceeding 10 mA, the installation instructions shall specify the rating of the residual current device (RCD) to be installed (EN 60335-2-40/A12)		N/A
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test, except that		P
	appliances normally used on the floor and having a mass exceeding 40 kg are not tilted		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
8.1.3	Instead of test probe B, test probe 18 and test probe 13, for appliances other than those of class II, test probe 41 of IEC 61032 is applied with a force not exceeding 1 N to live parts of visibly glowing heating elements, all poles of which can be disconnected by a single switching action		N/A
8.2	Compliance is checked by inspection and by applying the test probes of EN 61032 in accordance with the conditions specified in 8.1.1		P
	Test probe B and probe 18 of EN 61032 are applied to built-in appliances and fixed appliances only after installation		P
11.8	Footnotes to “External enclosure of motor-operated appliances” to be taken into account		P
13.2	Leakage current measurements (EN 60335-2-40)	(See appended table)	P
15.1.2	Appliances with an automatic cord reel tested with the cord in the most unfavourable position so that the reeling of the wet cord may affect electrical insulation during operation, the cord not being dried before reeling		N/A
15.2	Drain pan filled to brim and subjected to continuous overflow and fan(s) switched on (EN 60335-2-40)		P
16.2	Leakage current measurements (EN 60335-2-40)	(See appended table)	P

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
20.2	For appliances having hazardous moving parts, due to their working function, e.g. the needle of a sewing machine, tools of kitchen machines or the blade of an electrical knife, full protection is not possible for performing their intended use		N/A
	When using a test probe similar to test probe B of EN 61032, having a circular stop face and applied with a force of 5N, the accessories and detachable covers are removed		P
	When using test probe 18 it is applied with a force of 2,5N on the appliance fully assembled		P
22.12	Other parts intended to be detached during use, maintenance or cleaning (e.g. batteries, battery covers, lids, attachments, steam nozzles) are not considered as parts providing a similar function as handles, knobs, grips, levers		P
22.17	The requirement is not applicable to built-in appliances		N/A
22.44	An appliance is child-appealing if one of the following criteria is present:		-
	- appliance decorated using faces, cartoon like characters, or similar images		N/A
	- appliance using shapes representing animals, characters, persons or scale models		N/A
	An appliance is child-appealing if more than one of the following criteria are present:		-
	- using non-functional light (functional light is e.g. illumination of an object or area, signal indicating status of an appliance)		N/A
	- using non-functional sound (e.g. music)		N/A
	- using non-functional movement		N/A
	If the appliance is child-appealing, has a mass less than 4 kg or is mounted or normally intended for use at a height less than 850 mm, the following conditions shall be met:		-
	- surface temperature rise requirements not exceeded		N/A
	- hazardous moving parts not accessible		N/A
	- live parts not accessible		N/A
	- liquid temperature requirement not exceeded,		N/A
	unless for vessels in which two independent and sequential actions are needed to access the liquid		N/A
	- the requirement of 22.12 is applicable for all accessible parts of the appliance		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
24.1	Components comply with the safety requirements specified in the relevant EN standards as far as they reasonably apply		P
	Motors are not required to comply with EN 60034-1, but tested as part of the appliance according to this standard		P
	Relays are tested as part of the appliance according to this standard		P
	Relays may be alternatively tested to EN 60730-1 and the additional requirements in EN 60335-1		P
	The requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance		P
	Components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P
	Components that have not been tested and shown to comply with the EN standard for the relevant component are tested according to the requirements of 30.2 of this standard		P
	Components that have been tested and shown to comply with the resistance to fire requirements in the EN standard for the relevant component need not be retested provided that:		-
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		P
	- the test report for the component states the values of t_e and t_i acc. to EN 60695-2-11		P
	If the above two conditions are not satisfied, the component is tested as part of the appliance		P
	Power electronic converter circuits are not required to comply with EN 62477-1, but tested as part of the appliance according to this standard		P
	Unless components have been tested and found to comply with the relevant EN standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		P
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant EN standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components that have not been tested and found to comply with the relevant EN standard, and		P

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	components that are not marked or not used in accordance with their marking,		N/A
	are tested in accordance with the conditions occurring in the appliance, the number of samples being that required by the relevant standard		P
	Lamp-holders and starter-holders that have not been tested and found to comply with the relevant EN standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant EN standard under the conditions occurring in the appliance		N/A
	Where the relevant EN standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of Clause 11 are used		N/A
	There are no additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of EN 60320-1 and EN 60309, unless they are specifically mentioned in the text of this standard		N/A
	Plugs and socket-outlets and other connecting devices of interconnection cords are not interchangeable with plugs and socket-outlets listed in IEC/TR 60083 or IEC 60906-1, or		N/A
	with connectors and appliance inlets complying with the standard sheets of EN 60320-1, if		N/A
	direct supply to these parts from the supply mains gives rise to a hazard		N/A
	For plugs used in CENELEC countries Annex ZH applies		N/A
24.Z1	Type S2 and S3 capacitors according to EN 60252-1 are not required to undergo the testing as required by 30.2.2 and 30.2.3.1		N/A
25.1	Plugs and pins for insertion into socket outlets follow the relevant standards sheets in Annex ZH		N/A
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors, or		P
	when they are liable to be exposed to significant amount of ultraviolet radiation		P
25.25	Instead of IEC/TR 60083, dimensions of the pins and engagement face of plugs of appliances that are inserted into socket-outlets are in accordance with the dimensions of the relevant plug standard		N/A
	Common plugs and socket-outlets types in CENELEC countries as shown in Annex ZH		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position,		N/A
	unless they are held in place near the terminals independently of the solder		N/A
29.3.Z1	Appliance constructed so that if there is a possibility of damaging the insulation during installation, the insulation withstands the scratch and penetration test of 21.2		N/A
32	Compliance regarding electromagnetic fields is checked according to EN 62233		P
GG.2	Requirements for charge limits in unventilated areas (EN 60335-2-40/A1)		N/A
GG.Z1	Non-fixed factory sealed single package units with a charge amount of $m_1 < M \leq 2 \times m_1$ (EN 60335-2-40/A1)		N/A
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		N/A
	The duration of any of the tests is as specified in 19.7		N/A
ZA	**ANNEX ZA (**NORMATIVE) **SPECIAL NATIONAL CONDITIONS (EN)**		N/A
	Denmark, Sweden, Norway and Finland		N/A
7.12.8	The maximum inlet water pressure is at least 1,0 MPa .... :		N/A
	Norway		N/A
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
	Norway		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
	Denmark		N/A
22.47	The maximum inlet water pressure is at least 1,0 MPa .... :		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Ireland, United Kingdom and Cyprus		N/A
25.8	In the table, the line >10 A and ≤16 A is replaced with:		-
	> 10 and ≤ 13 1,25 (1,0)[b]		N/A
	> 13 and ≤ 16 1,5 (1,0)[b]		N/A
ZB	**ANNEX ZB** (INFORMATIVE) **A-DEVIATIONS**		N/A
	Ireland		N/A
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		N/A
25.1 and 25.25	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances.		N/A
	It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A
ZC	ANNEX ZC **(NORMATIVE)** NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		**P**
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document		P
ZD	**ANNEX ZD** (INFORMATIVE) **IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS**		P
	List of IEC and CENELEC code designations for flexible cords		P
ZE	**ANNEX ZE** (NORMATIVE) **SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE**		N/A
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative .....:		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Model or type reference ..... :		N/A
	Serial number, if any		N/A
	Production year		N/A
	Designation of the appliance ..... :		N/A
7.12	Instructions provided with the appliance so that the appliance can be used safely		N/A
	The instructions contain at least the following information:		-
	- the business name and full address of the manufacturer and, where applicable, his authorized representative		N/A
	- model or type reference of the appliance as marked on the appliance itself, except for the serial number		N/A
	- the designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers		N/A
	- the general description of the appliance, when needed due to the complexity of the appliance		N/A
	- specific precautions required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving		N/A
	- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance		N/A
	- the possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance		N/A
	The words “Original instructions” appear on the language version(s) verified by the manufacturer or by the authorized representative		N/A
	When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence “Translation of the original instructions” appear in the relevant instructions delivered with the appliance		N/A
	The instructions for maintenance/service to be done by specialized personnel, mandated by the manufacturer or the authorized representative may be supplied in only one Community language which the specialized personnel understand		N/A
	The instructions indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	"This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons". (EN 60335 2 40/A13)		N/A
7.12.ZE1	If needed for specific appliances, the following information to be given:		-
	- on use, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns, if these operations have consequences on stability of the appliance in order to avoid overturning, falling or uncontrolled movements of the appliance or of its component parts		N/A
	- on how to maintain adequate mechanical stability when in use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
	- on the protective measures to be taken by the user, including, where appropriate, the personal protective equipment to be provided		N/A
	- on the operating method to be followed in the event of accident or breakdown; if a blockage is likely to occur the operating method to safely unblock the appliance		N/A
	- on the specifications on the spare parts to be used, when these affect the health and safety of the operator		N/A
	- on airborne noise emissions, determined and declared in accordance with the Annex ZAB, which includes: (EN 60335 2 40/A13):		-
	- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A) ..... ; (EN 60335 2 40/A13)		N/A
	- where this level does not exceed 70 dB(A), no value needs to be given, but the instructions shall state that the A-weighted sound pressure level is below 70 dB. (EN 60335-2-40/A13)		N/A
	- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 µPa) ..... :		N/A
	- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A) ..... :		N/A
7.12.ZE2	The instructions include a warning to disconnect the appliance from its power source during service and when replacing parts		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug is such that an operator can check from any of the points to which he has access that the plug remains removed		N/A
	If this is not possible, due to the construction of the appliance or its installation, a disconnection with a locking system in the isolated position is provided		N/A
19.11.4.8	The appliance continues to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage fluctuation occurred, or		N/A
	a manual operation is required to restart it		N/A
20.1	Appliances and their components and fittings have adequate mechanical stability during transportation, assembly, dismantling and any other action involving the appliance		N/A
20.2	Dangerous moving transmission parts safeguarded either by design or guards		N/A
	When guards are used, they are fixed guards, interlocking movable guards or protective devices		N/A
	Moving parts directly involved in the function of the appliance which cannot be made completely inaccessible fitted with:		-
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N/A
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N/A
	Interlocking movable guards used where frequent access is required		N/A
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N/A
	The distance between the seat and the control devices capable of being adapted to the operator		N/A
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N/A
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N/A
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N/A
22.ZE.4	Where the weight, size or shape prevents appliances from being moved manually, they are fitted with attachments for lifting gear, or		N/A
	so designed that they can be fitted with such attachments, or		N/A
	be shaped in such a way that standard lifting gear can easily be used		N/A
	Appliances to be moved manually are constructed or equipped so that they can be moved easily and safely		N/A
22.ZE.5	The fixing systems of fixed guards which prevent access to dangerous moving transmission parts only removable with the use of tools		N/A
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N/A
	Where possible, guards are incapable of remaining in place without their fixings		N/A
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N/A
	Movable guards are interlocked		N/A
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N/A
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		-
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N/A
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Interlocking movable guards remain attached to the appliance when open, and		N/A
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N/A
22.ZE.6	Interlocking movable guards designed in such a way that the absence or failure of one of their components prevents starting or stops the hazardous appliance functions		N/A
	The guard is opened at the extent needed to cause the interlocking to operate and is then closed. This operation is carried out for 5 000 cycles at a rate of 5 cycles per min. (EN 60335 2 40/A13/AC)		N/A
	After this test any defect that may be expected in normal use is applied to the interlock system, including interruption of the supply, only one defect being simulated at a time		N/A
	After these tests the interlock system is fit for further use		N/A
22.ZE.7	Adjustable guards restricting access to areas of the moving parts strictly necessary for the work are:		-
	- adjustable manually or automatically, depending on the type of work involved, and		N/A
	- readily adjustable without the use of tools		N/A
22.ZE.8	In case of interruption, re-establishment after an interruption or fluctuation in whatever manner of the power supply, the appliance does not restart		N/A
	However, automatic restarting of the operation is allowed if the appliance may continue to operate, without causing any hazard to the user, from the same point in its operating cycle at which the voltage interruption or fluctuation occurred		N/A
22.ZE.9	Appliances fitted with means to isolate them from all energy sources		N/A
	Such isolators are clearly identified, and		N/A
	they are capable of being locked if reconnection endanger persons		N/A
	After the energy source is disconnected, it is possible to dissipate any energy remaining or stored in the circuits of the appliance without risk to persons		N/A
ZF	**ANNEX ZF** (INFORMATIVE) **CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD**		P

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive) ..... :	LVD	P
ZG	**ANNEX ZG** (NORMATIVE) **UV APPLIANCES**		P
	The following modifications to this standard apply to appliances having UV emitters		P
	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		P
32	For appliances incorporating UV emitters the manufacturer delivers a declaration providing evidence that the plastic material exposed to the radiation is UV resistant		P
ZH	**ANNEX ZH** (INFORMATIVE) **Common plug and socket-outlet types in CENELEC countries**		N/A
	In general, supply cords of single-phase appliances having a rated current not exceeding 16 A are fitted with a plug complying with the following standard sheets:		-
	- for class I appliances or class II appliances with functional earth, standard sheet EU2, EU3 or EU4 ..... :		N/A
	- for class II appliances, standard sheet EU5, EU6 or EU7 ..... :		N/A
	There are exemptions or differences in certain CENELEC countries		N/A
ZI	**ANNEX ZI** (INFORMATIVE) **Information on the application of A11:2014 to EN 60335-1:2012** **CENELEC CLC/TC 61(SEC)2096A**		P
	Clarification of the application of parts 2 in conjunction with the 2002 or 2012 version of EN 60335-1		P
ZZA	**ANNEX ZZA** (INFORMATIVE) **RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96} AIMED TO BE COVERED**		P
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU		P

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		P
ZZB	**ANNEX ZZB** (INFORMATIVE) **RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED**		N/A
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		N/A
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		N/A
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		N/A
ZAA	**ANNEX ZAA** (INFORMATIVE) **(EN 60335-2-40/A11)** **THE RELEVENCE OF THE PRESSURE EQUIPMENT DIRECTIVE**		P
	Refrigerating systems having a pressure greater than 0,05 MPa are considered to be assemblies falling within the scope of the Pressure Equipment Directive, 97/23/EC. However, according to Article 1, item 3.6 of the directive, equipment classified no higher than category I and covered by the low voltage directive is excluded from its scope. (EN 60335-2-40/A11)		P
	According to guideline 1/39 of the directive, this exclusion applies to both components and assemblies (refrigerant circuits). This applies to appliances containing vessels (e.g. compressors, receivers) or piping with limits in accordance with the following (EN 60335-2-40/A11):		P
	Vessels (EN 60335-2-40/A11)		P
	- dangerous refrigerants (Annex II, Table 1) (EN 60335-2-40/A11):		-
	- volume not exceeding 1 l, or (EN 60335-2-40/A11)		P

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- pressure x volume not exceeding 5 MPa l (EN 60335-2-40/A11)		P
	- non-dangerous refrigerants (Annex II, Table 2) (EN 60335-2-40/A11):		-
	- volume not exceeding 1 l, or (EN 60335-2-40/A11)		N/A
	- pressure x volume not exceeding 20 MPa l (EN 60335-2-40/A11)		N/A
	Piping (EN 60335-2-40/A11)		-
	- dangerous refrigerants (Annex II, Table 6) (EN 60335-2-40/A11):		-
	- numerical designation not exceeding 25, or (EN 60335-2-40/A11)		P
	- pressure not exceeding 1 MPa and numerical designation not exceeding 100, or (EN 60335-2-40/A11)		P
	- pressure exceeding 1 MPa and pressure x numerical designation not exceeding 100 MPa (EN 60335-2-40/A11).		P
	- non-dangerous refrigerants (Annex II, Table 7) (EN 60335-2-40/A11):		-
	-numerical designation not exceeding 100, or (EN 60335-2-40/A11)		N/A
	- pressure x numerical designation not exceeding 350 MPa (EN 60335-2-40/A11).		N/A
	For other components, the most onerous limit of the two applies (EN 60335-2-40/A11)		N/A
	The volume is the internal volume of the vessel and includes the volume of pipework up to the first connection. It excludes the volume of fixed internal parts (EN 60335-2-40/A11)		P
	The pressure is the maximum pressure the vessel or piping system is exposed to, as specified by the manufacturer of the appliance (EN 60335-2-40/A11)		P
	The numerical designation designates the size common to all components in the piping system (EN 60335-2-40/A11)		P
	If any component exceeds the limits given above, the appliance has to comply with the directive. The technical requirements are given in Annex I and the conformity assessment tables and procedures in Annexes II and III of the directive (EN 60335-2-40/A11)		N/A
	Commonly used dangerous refrigerants, identified as Group 1 in the directive, are listed in table ZAA.1 (EN 60335-2-40/A11)		P

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Commonly used non-dangerous refrigerants, identified as Group 2 in the directive, are listed in table ZAA.2 (EN 60335-2-40/A11)		N/A
ZAB	**ANNEX ZAB** (NORMATIVE) **(EN 60335-2-40/A13)** **EMISSION OF ACOUSTICAL NOISE FROM APPLIANCES COVERED BY ANNEX ZE**		N/A
ZAB.1	Noise reduction is an integral part of the design process and achieved by particularly applying measures at source to control noise, see for example EN ISO 11688-1. (EN 60335-2-40/A13)		N/A
	Success of the applied noise reduction measures is assessed on the basis of the actual noise emission values in relation to other machines of the same type with comparable non-acoustical technical data. (EN 60335-2-40/A13)		N/A
ZAB.2.1	A-weighted emission sound pressure level determined in accordance with EN 11203:2009, 6.2.3 d) with the surface S being the measurement surface used for the sound power level determination. (EN 60335-2-40/A13)		N/A
	If the sound power level determination is based on a measurement method requiring a reverberant sound field, the surface S to define Q, shall be a parallelepiped measurement surface at a distance of 1 m from the reference box enclosing the source and assuming only one reflecting surface. (EN 60335-2-40/A13)		N/A
ZAB.2.2	A-weighted sound power level determined in accordance with EN 12102 applying a measurement method of at least grade 2. (EN 60335-2-40/A13)		N/A
	If a grade 3 measurement method used for determining the A-weighted sound power level, the. reasons are explicitly mentioned (EN 60335-2-40/A13)		N/A
ZAB.2.3	Total measurement uncertainty is depending on the standard deviation of reproducibility σ_{R0} of the measurement method and the standard deviation σ_{omc} representing the instability of the operating and mounting conditions. (EN 60335-2-40/A13)		N/A
	σ_{R0} has an upper value for a grade 2 measurement method of about 1,5 dB, whereas σ_{omc} may have values between 0,5 dB for small variations of the sound power due on the mounting and operating conditions or 4 dB for very instable sources (EN 60335-2-40/A13)		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Total measurement uncertainty for the A-weighted emission sound pressure level is of the same order as the one for the respective sound power level measurement. (EN 60335-2-40/A13)		N/A
ZAB.2.4	Information to be recorded covers all the technical requirements of this noise test code. (EN 60335-2-40/A13)		N/A
	Any deviations from this noise test code or from the basic standards upon which it is based are to be recorded together with the technical justification for such deviations. (EN 60335-2-40/A13)		N/A
ZAB.2.5	Information to be given in the test report includes: (EN 60335-2-40/A13)		-
	- the data required by the manufacturer for inclusion in the noise declaration,. (EN 60335-2-40/A13)		N/A
	- the data required by the user to verify the declared values. (EN 60335-2-40/A13)		N/A
	Thus the following information shall be included: (EN 60335-2-40/A13)		-
	- reference to the noise test code and the basic noise emission standards used; (EN 60335-2-40/A13)		N/A
	- description of the installation and operation conditions used; (EN 60335-2-40/A13)		N/A
	- location of the work station(s) and other specified positions; (EN 60335-2-40/A13)		N/A
	- the noise emission values obtained (EN 60335-2-40/A13)		N/A
	Test report states that all requirements of the noise test code have been fulfilled, or, if this is not the case, it shall identify any unfulfilled requirements. (EN 60335-2-40/A13)		N/A
	Deviations from the requirements stated and a technical justification for these deviations shall be given. (EN 60335-2-40/A13)		N/A
ZAB.2.6	Noise emission declaration is made according to EN ISO 4871 (EN 60335-2-40/A13)		N/A
	Emission sound pressure level L_{pA} is made as a dual number noise emission declaration, thus declaring the determined value for L_{pA} and the respective uncertainty K_{pA}. (EN 60335-2-40/A13)		N/A
	Sound power level L_{WA} is declared as single number noise emission declaration declaring the sum of the measured sound power level and its uncertainty K_{WA}. (EN 60335-2-40/A13)		N/A

IEC60335_2_40R ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Noise declaration states that the noise emission values have been obtained according to this noise test code. (EN 60335-2-40/A13)		N/A
	Any deviations from this noise test code or from the basic standards upon which it is based are clearly indicated. (EN 60335-2-40/A13)		N/A
	Additional noise emission values are given in the declaration. (EN 60335-2-40/A13)		N/A
	If undertaken, verification of the noise emission values shall be conducted according to EN ISO 4871, using the same mounting and operating conditions as those used for the initial determination. (EN 60335-2-40/A13)		N/A
	ANNEX EN 62233:2008 + AC:2008 **EMF- ELECTROMAGNETICS FIELDS**		P
	The tested product also complies with the requirements of EN 62233:2008		
	Limit ……100%	Measured max. : 1,347 %	P

Photo No. 1.

Description: Indoor Unit

Photo No. 2.

Description: Indoor Unit

Photo No. 3.

Description: Indoor Unit

Photo No. 4.

Description: Indoor Unit

Photo No. 5.

Description: Indoor Unit

Photo No. 6.

Description: Indoor Unit

Photo No. 7.

Description: Indoor Unit

Photo No. 8.

Description: Indoor Unit

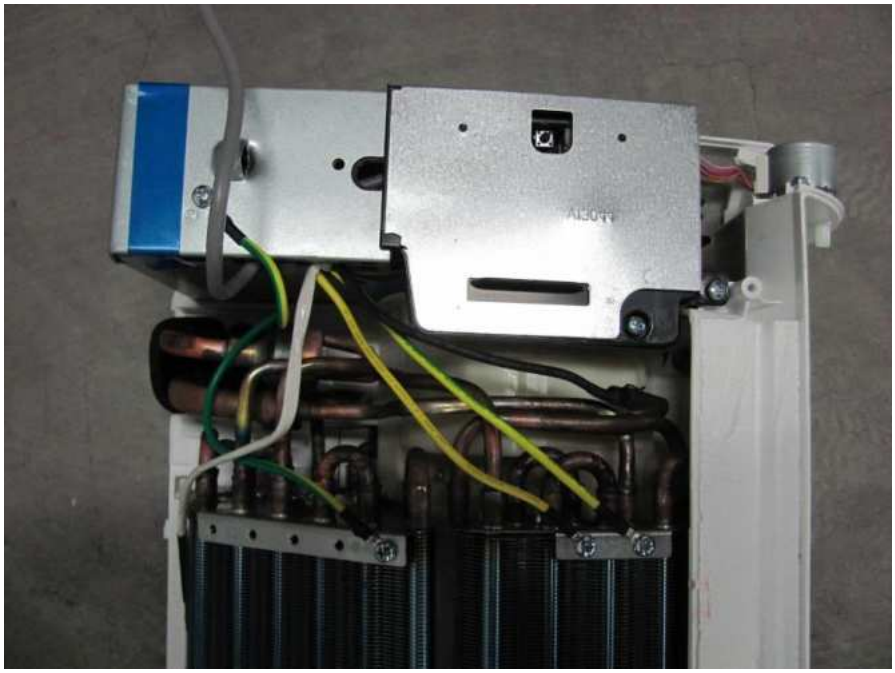


Photo No. 9.

Description: Indoor Unit

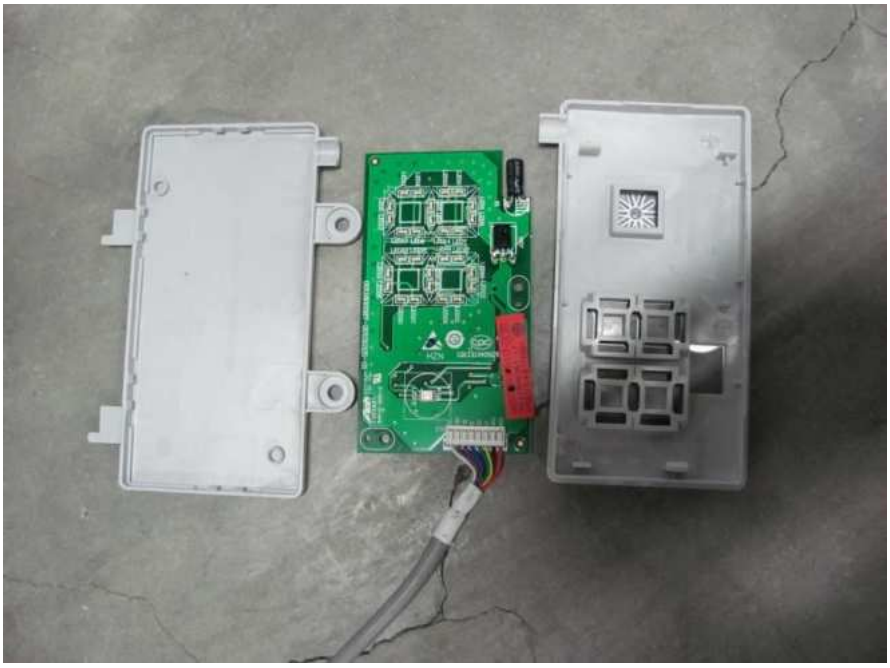


Photo No. 10.

Description: Indoor Unit

Photo No. 11.

Description: Indoor Unit

Photo No. 12.

Description: Indoor Unit

Photo No. 13.

Description: Indoor Unit

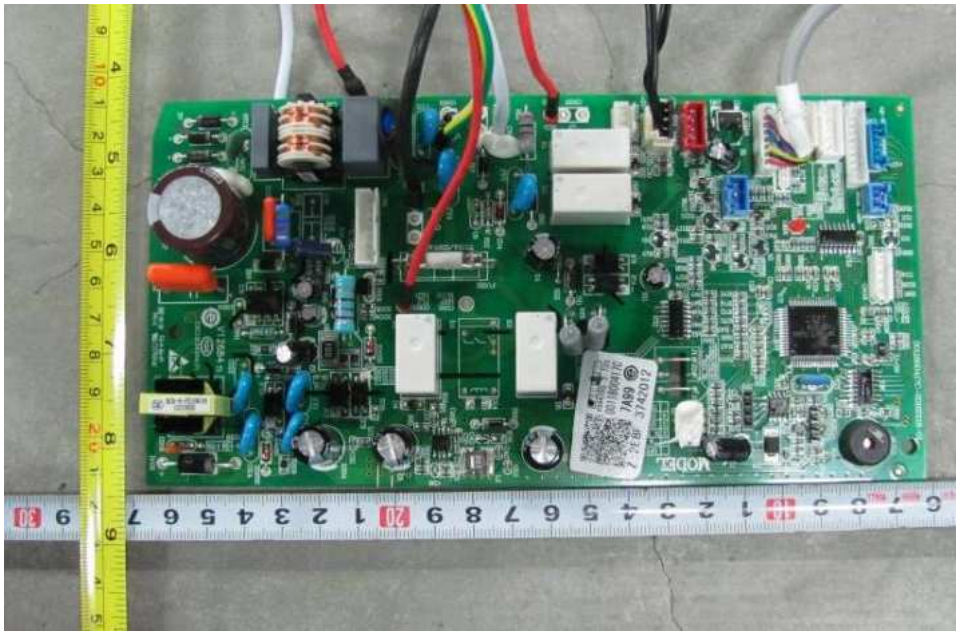


Photo No. 14.

Description: Indoor Unit

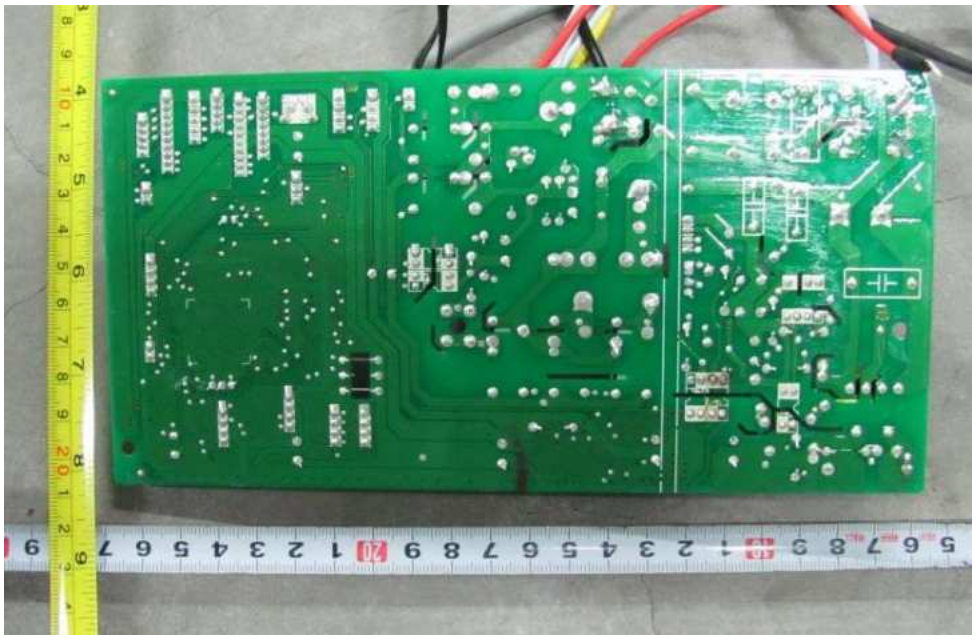


Photo No. 15.
Description: Indoor Unit with UVC Sterilization Module

Photo No. 16.
Description: UVC Sterilization Module

Photo No. 17.

Description: UVC Sterilization Module

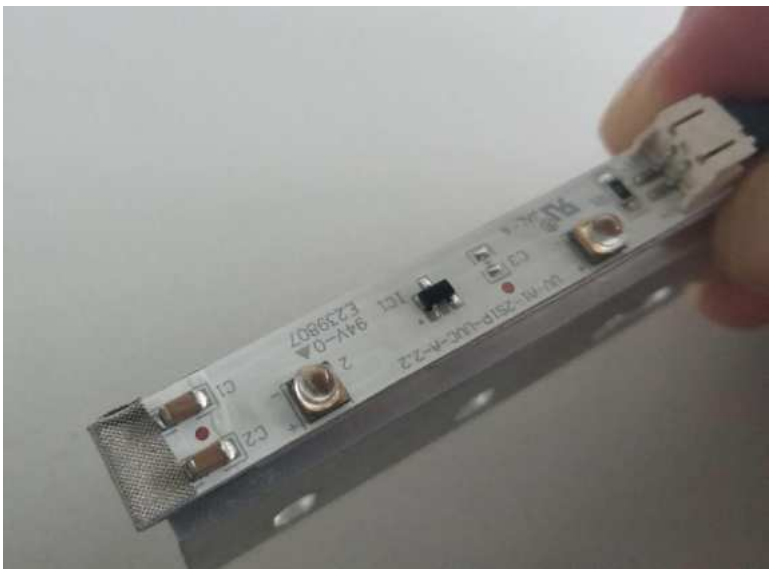


Photo No. 18.

Description: Indoor unit with WI-FI module

Photo No. 19.

Description: Outdoor Unit

Photo No. 20.

Description: Outdoor Unit

Photo No. 21.

Description: Outdoor Unit

Photo No. 22.

Description: Outdoor Unit

Photo No. 23.

Description: Outdoor Unit

Photo No. 24.

Description: Outdoor Unit

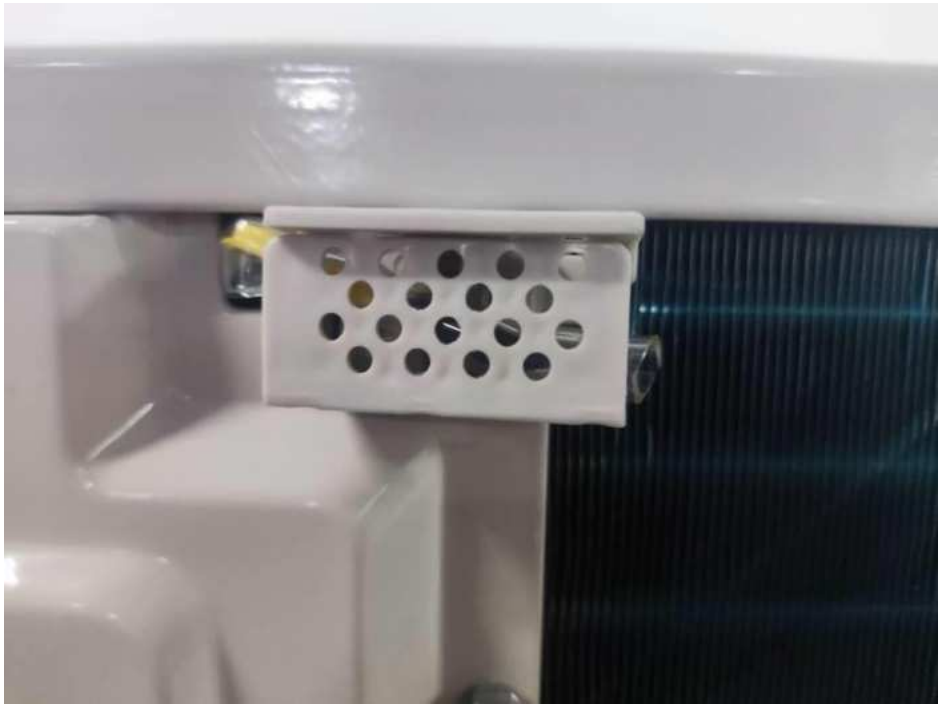


Photo No. 25.

Description: Outdoor Unit

Photo No. 26.

Description: Outdoor Unit

Photo No. 27.

Description: Outdoor Unit

Photo No. 28.

Description: Outdoor Unit

Photo No. 29.

Description: Outdoor Unit

Photo No. 30.

Description: Outdoor Unit

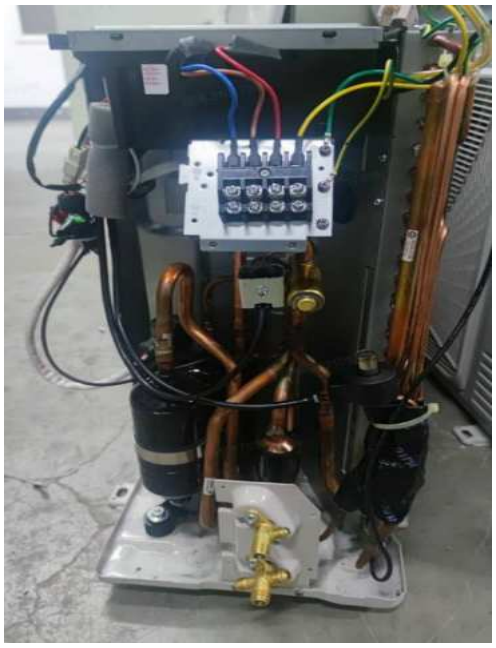


Photo No. 31.

Description: Outdoor Unit

Photo No. 32.

Description: Outdoor Unit

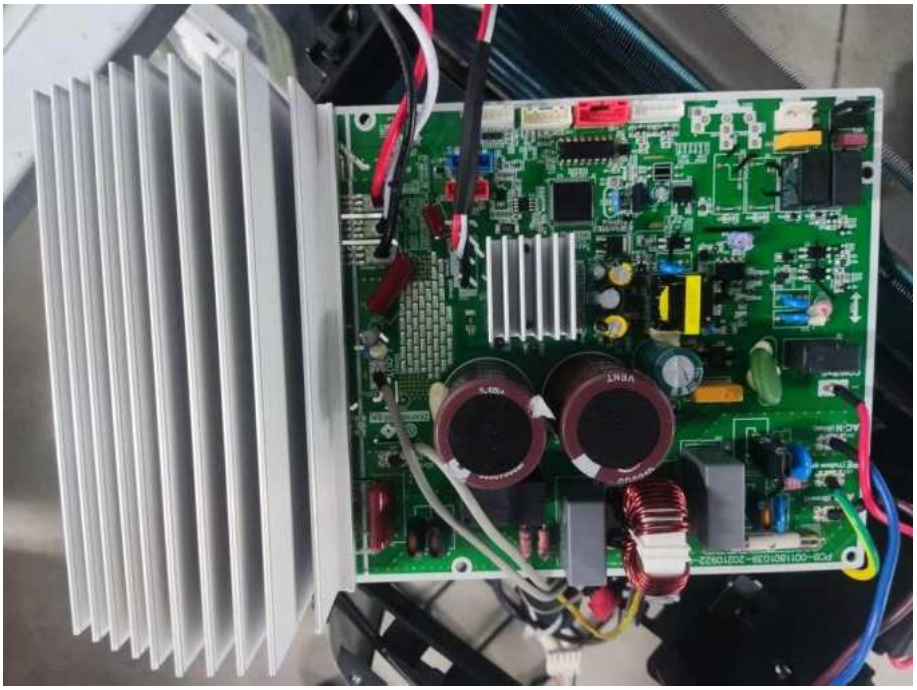


Photo No. 33.

Description: Outdoor Unit

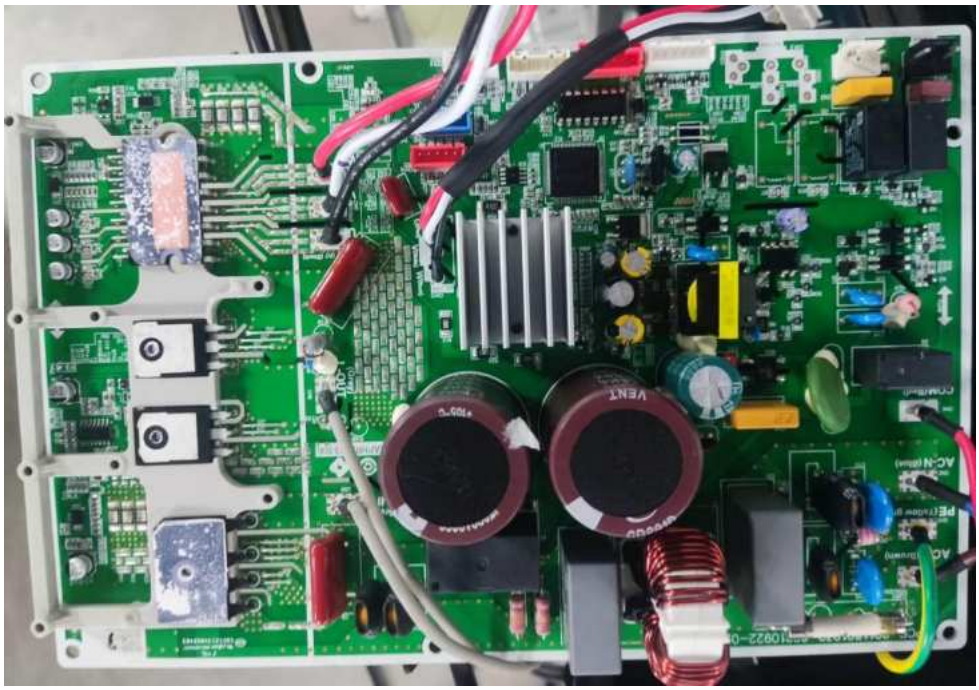
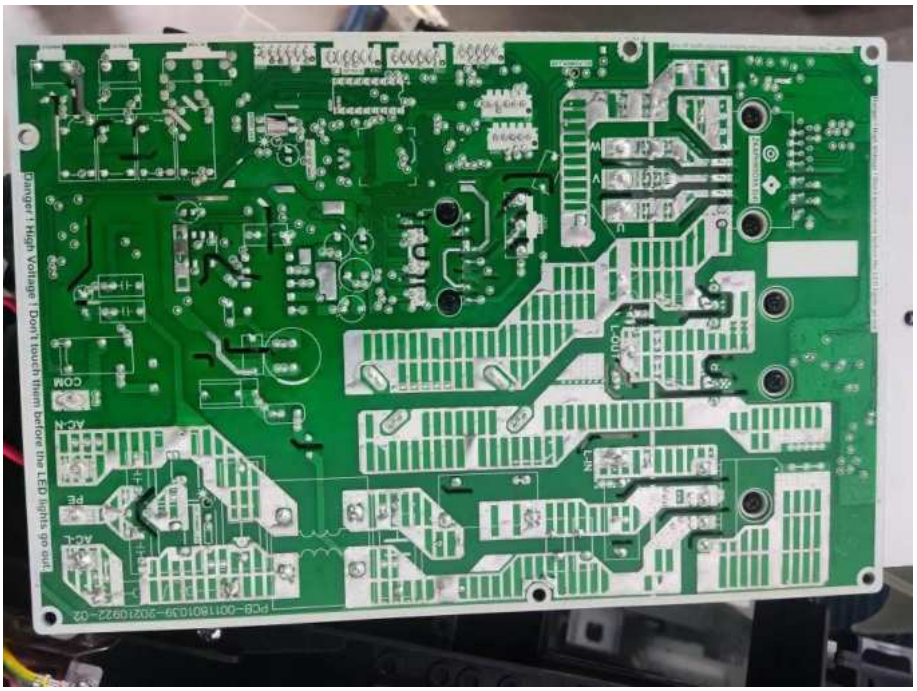


Photo No. 34.

Description: Outdoor Unit



END