Test Report issued under the responsibility of:

SGS Fimko Ltd.

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..... :	GZES141101339802A1
Date of issue ..... :	2014-12-25, Amendment 1: 2016-04-25
Total number of pages..... :	50
Applicant's name ..... :	United International Co., Ltd.
Address ..... :	12 Floor, 520, Section 4, Ren Ai Road, Taipei, Taiwan
Test specification:	
Standard ..... :	IEC 60335-2-40:2002 (Fourth Edition) + A1:2005 (incl. Corr.1:2006) + A2:2005 in conjunction with IEC 60335-1:2010 (Fifth Edition)
Test procedure ..... :	CB Scheme
Non-standard test method..... :	N/A
Test Report Form No. ..... :	IEC60335_2_40G
Test Report Form(s) Originator..... :	VDE
Master TRF ..... :	Dated 2013-05

Test item description ..... :	Dehumidifier
Trade Mark ..... :	**air master**
Manufacturer ..... :	Zhongshan Lianchang Co., Ltd. 72 Changjiang Road, Zhongshan, Guangdong, China
Model/Type reference ..... :	PDx-PAyz (x=10, 12, 16, 20; y=E, M1, RB, z=Blank, T (when x=16, 20; y=E, M1))
Ratings ..... :	220 V– 240 V; 50 Hz; PD10 series: 250 W; PD12 series: 260 W; PD16 series: 410 W(PD16-PAET, PD16-PAM1T: 850 W (heating function)); PD20 series: 480 W(PD20-PAET, PD20-PAM1T, 950 W(heating function));

Testing procedure and testing location:		
☒	CB Testing Laboratory:	SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch
Testing location/ address.....:		Building 1, European Industrial Park, No.1, Shunhenan Road, Wusha, Daliang, Shunde District, Foshan, Guangdong, China
☐	Associated CB Testing Laboratory:	
Tested by (name + signature) .....:		Elaine Gao
Approved by (name + signature).....:		Mike Liu
☐	Testing procedure: TMP	N/A
Testing location/ address.....:		
Tested by (name + signature) .....:		
Approved by (name + signature).....:		
☐	Testing procedure: WMT	N/A
Testing location/ address.....:		
Tested by (name + signature) .....:		
Witnessed by (name + signature) Testing location/ address .....: .....:		
Approved by (name + signature).....:		
☐	Testing procedure: SMT	N/A
Testing location/ address.....:		
Tested by (name + signature) .....:		
Approved by (name + signature).....:		
Supervised by (name + signature) .....:		

List of Attachments:

Attachment 2: 1 page of photo document.
Attachment 3: 1 page of circuit diagram document.
Attachment 4: 1 page of EN 60335-1: 2012 / A11: 2014.
Attachment 5: 12 pages of IEC 60335-1: 2010/ A1: 2013.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Tests according to the following standards were carried out: IEC 60335-2-40: 2002 + A1: 2005 + A2: 2005 IEC 60335-1: 2010 + A1: 2013 EN 60335-2-40: 2003 + A11: 2004 + A12: 2005 + A1: 2006 + A2: 2009 + A13: 2012 EN 60335-1: 2012 + A11: 2014 EN 62233: 2008 After reviewing, PD20-PAET subjected to the test of clause 10, 11, 13, 15, 16, 19, 22, 29 and 30. The submitted sample complied with above standards	See page 2.

Summary of compliance with National Differences

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

Copy of marking plate:

N/A

Remark:

1. As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

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

Test item particulars ..... :	
Classification of installation and use ..... :	Portable appliance
Supply Connection ..... :	Non-detachable cord fixed with plug
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing ..... :	
Date of receipt of test item ..... :	2016-04-14
Date (s) of performance of tests ..... :	2016-04-14 to 2016-04-25

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

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

This TRF includes an appendix EMF containing the IEC/EN 62233 requirements (see below).
IEC 62233:2005 (1. Edition)
EN 62233:2008 (incl. Corr.1:2008)

This test report GZES141101339802A1 was not valid without use conjunction with the original test report GZES141101339801.

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) .....: Same as manufacturer

General product information:

The appliance is for household and indoor use only, refrigerant is R134A. The appliances have dehumidification function.
PDx-PAyz series models have similar construction and similar appearance.
x= 10, 12, 16, 20. It denotes different dehumidification capacity.
y = E, M1, RB. It denotes different control type, E and M1 denote electronic type, RB denote mechanical type.
z =T or Blank. T denotes the appliances with PTC element ; Blank denotes the appliance without PTC element.
PD10-Pay, PD12-Pay and PD16-Payz, PD20-PAyz have different air duct system
Details as follows:

Electronic type (main PCB of without transformer		Electronic type (main PCB of with transformer)		Mechanical type	Other
Without PTC	With PTC	Without PTC	With PTC	Without PTC	--
PD10-PAE	--	PD10-PAM1	--	PD10-PARB	Compressor, fan motor and air duct system
PD12-PAE	--	PD12-PAM1	--	PD12-PARB	Same as PD10 series except the refrigerant mass
PD16-PAE	PD16-PAET	PD16-PAM1	PD16-PAM1T	PD16-PARB	Same as PD 20 series except for the Compressor, fan motor
PD20-PAE	PD20-PAET	PD20-PAM1	PD20-PAM1T	PD20-PARB	Compressor, fan motor and air duct system

Amendment 1:
The original Test Report Ref. No. GZES141101339801, dated on 2014-12-25 was modified on 2016-04-25 to include the following changes:
1. Added alternative main PCB for PDx-PAM1z and PDx-PAEz;
2. Updated the standard to IEC 60335-1: 2010 / A1: 2013;
3. Updated the standard to EN 60335-1: 2012 / A11: 2014.

After reviewing, PD20-PAET subjected to the test of clause 10, 11, 13, 15, 16, 19, 22, 29 and 30.

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
10	POWER INPUT AND CURRENT		--
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1 .:	(see appended table)	P
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		P
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2.....:		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated current is related to the arithmetic mean value of the range		N/A
11	HEATING		--
11.1	No excessive temperatures in normal use (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):		--
	- 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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
11.2.2	Appliance without supplementary heaters, air outlet used (IEC 60335-2-40)		N/A
11.3	Temperature rise determine by thermocouples or resistance method (IEC 60335-2-40)		P
11.4	Test performed at supply voltage between 0,94 and 1,06 times the rated voltage (IEC 60335-2-40)	1,06 x 240 V= 254,4 V	P
	Heating elements energized at voltage which gives an electrical input of 1,15 times maximum rated power input (IEC 60335-2-40)	$1,15^{1/2}$ x 240 V= 257,4 V	P
11.5	Test conducted in heating mode and cooling mode, if both exist (IEC 60335-2-40)		N/A
	All supplementary heating elements operative simultaneously (IEC 60335-2-40)	PTC	P
11.6	Defrost test in most unfavourable conditions, if needed (IEC/EN 60335-2-40)		N/A
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)		P
	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		--
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 V/257,4 V	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		N/A
	For other appliances, a low impedance ammeter may be used		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
15	MOISTURE RESISTANCE		--
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/A2)		P
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529 .....:		N/A
	Water valves containing live parts in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube, and		N/A
	for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		N/A
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N/A
15.2	Tests in accordance with IEC 60529 in appliances other than IPX0, as specified (IEC 60335-2-40) ...:		N/A
15.3	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/A2)		P
	After spillage completed, appliance withstand test of clause 16 (IEC 60335-2-40/A2)		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		--
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1,06 times rated voltage (V).....:	1,06 x 240 V= 254,4 V	P
	Three-phase appliances: test voltage 1,06 times rated voltage divided by √3 (V) .....:		N/A
	Leakage current measurements .....: (IEC 60335-2-40)	(see appended table)	P
	Limit values doubled if:		--
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	With the radio interference filters disconnected, the leakage current do not exceed limits specified .....:		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
19	ABNORMAL OPERATION		--
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated (tests 19.2-19.14) (IEC 60335-2-40)		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 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).....:		P
	Temperature of enclosure does not exceed (°C) (IEC 60335-2-40).....:	150 °C	P
	Temperature of the windings does not exceed the values shown in the table ; temperature (°C) (IEC 60335-2-40).....:	(See appendix 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
	At the end, leakage current between windings and enclosure does not exceed 2 mA (IEC 60335-2-40)		P
19.3	Motor-compressor complies with IEC 60335-2-34 (IEC 60335-2-40)		P
	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)		N/A
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)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
19.5	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)		P
19.6	Test of appliances using water as heat transfer medium (IEC 60335-2-40)		N/A
19.7	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	Test of appliances with supplementary heaters (IEC 60335-2-40)		P
19.9	Test at temperature permitting continuous operation of the motor-compressor and electric heating elements at same time (IEC 60335-2-40)		N/A
19.10	Test of appliance with any defect which expected during normal use (IEC 60335-2-40)		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/A2)		N/A
	However, controls not short-circuited but one end of element connected to sheath of heating element (IEC 60335-2-40/A2)		N/A
	Test repeated with polarity of supply to appliance reversed and with other end of element connected to sheath (IEC 60335-2-40/A2)		N/A
	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/A2)		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
	Windings temperature not exceeding values shown in table 8 (IEC 60335-2-40)		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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)		P
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)		P
	- 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)		P
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)		N/A
	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
	e) failure of triacs in diode mode (IEC 60335-2-40)		N/A
	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
	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);		N/A
	- as specified in clause 19.2, if fault can recognised by user (IEC 60335-2-40);		N/A
	- until steady conditions stablished (IEC 60335-2-40).		P

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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)		N/A
	Fault condition f) applied to encapsulated or similar components (IEC 60335-2-40)		N/A
	PTC's, NTC's and VDR's resistors not short-circuited if used as specified by manufacturer (IEC 60335-2-40)		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
	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	Appliances with PTC heating elements test as specified (IEC 60335-2-40)		P
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/A2)		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
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/A2)		P
	During test temperature not exceed 150 °C but an overshoot of 25 °C is permitted during first hour (IEC 60335-2-40/A2)		P
22	CONSTRUCTION		--

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	- 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		P
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		P
	Voltage not exceeding 34 V (V) .....:	12 V	P
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		N/A
	Electrical insulation not affected by snow penetration to appliance enclosure (IEC 60335-2-40)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		P
	the substance has adequate insulating properties		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N/A
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		N/A
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		N/A
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		P

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Clause	Requirement + Test	Result - Remark	Verdict
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
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N/A
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements 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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.25	Sagging heating conductors, except in class III appliances or class III constructions that do not contain live parts, cannot come into contact with accessible metal parts		N/A
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N/A
22.28	Metal parts of class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
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		N/A
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N/A
	they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A
	If the appliance can operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
	Resistors checked by the test of 14.1 a) in IEC 60065		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P

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Clause	Requirement + Test	Result - Remark	Verdict
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		N/A
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		N/A
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		N/A
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		--
	- continuously, or		N/A
	- automatically, or		N/A
	- remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.101	Appliances intended to be fixed, securely fixed (IEC 60335-2-40)		N/A

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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/A2)		P
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/A2)		N/A
	However, for appliances intended to be connected to fixed wiring, the neutral conductor need not be disconnected (IEC 60335-2-40/A2)		N/A
22.102.3	Thermal cut-outs of capillary type open in event of leakage from capillary tube (IEC 60335-2-40/A2)		N/A
22.103	Non-self-resetting cut-outs independent of other control devices (IEC 60335-2-40)		P
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
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 shiw no derformation 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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/A1)		P
22.113	Flammable refrigerant used, refrigerant tubing protected or enclosed to avoid mechanical damage (IEC 60335-2-40/A1)		N/A
	Tubing protected to extent that it will not be handled or used for carrying during moving of product (IEC 60335-2-40/A1)		N/A
	Tubing located within confines of cabinet considered to be protected from mechanical damage (IEC 60335-2-40/A1)		N/A
22.114	Flammable refrigerant used, low temperature solder alloys, such as lead/tin alloys, not acceptable for pipe connections (IEC 60335-2-40/A1)		N/A
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/A1)		N/A
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/A1)		N/A
	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/A1)		N/A
	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/A1):		--
	- 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/A1)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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/A1)		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/A1)		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/A1)		N/A
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/A1)		N/A
	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/A1):		--
	- 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/A1)		N/A
	- Reusable mechanical connectors and flared joints are not allowed indoors (IEC 60335-2-40/A1)		N/A
	- Refrigerant tubing shall be protected or enclosed to avoid damage (IEC 60335-2-40/A1)		N/A
	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/A1)		N/A
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		--
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies.....:		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation .....:		N/A
	For motor-compressor not complying with IEC 60335-2-34, additions and modifications as specified (IEC 60335-2-40)		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless .....:	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500 V and above are increased by 0,5 mm and the impulse voltage test is not applicable		P
	Impulse voltage test is not applicable:		--
	- when the microenvironment is pollution degree 3, or		N/A
	- for basic insulation of class 0 and class 01 appliances		N/A
	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		N/A
	Lacquered conductors of windings considered to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16 .....:	(see appended table)	P

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

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Clause	Requirement + Test	Result - Remark	Verdict
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree .....:	(see appended table)	P
	Pollution degree 2 applies, unless		P
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- insulation subjected to conductive pollution; pollution degree 3	For insulation located in airflow	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
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17 .....:		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 .....:		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or .....:	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable.....:		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or .....:	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable.....:		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18 .....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18 .....:		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		--
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		P
	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		N/A
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		P
	Supplementary insulation consist of at least 2 layers	Plastic enclosure: 1,6 mm; Control panel: 1,3 mm	P
	Reinforced insulation consist of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N/A
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19 .....:		N/A
30	RESISTANCE TO HEAT AND FIRE		--
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	parts of thermoplastic material providing supplementary or reinforced insulation		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C) .....:	(see appended table)	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) .....:		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		P
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		P
	Compliance checked by the test of 30.2.1, and in addition:		P
	- for attended appliances, 30.2.2 applies		N/A
	- for unattended appliances, 30.2.3 applies		P
	For appliances for remote operation, 30.2.3 applies		N/A
	For base material of printed circuit boards, 30.2.4 applies		P
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C		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		P
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N/A
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P
	The tests are not applicable to conditions as specified .....:		N/A
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and		P
	parts of non-metallic material, other than small parts, within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C		P
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C		N/A
30.2.3.2	Parts of non-metallic material supporting connections, and		P

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Clause	Requirement + Test	Result - Remark	Verdict
	parts of non-metallic material within a distance of 3 mm,		P
	subjected to glow-wire test of IEC 60695-2-11		P
	The test severity is:		--
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		P
	- 650 °C, for other connections		P
	Glow-wire applied to an interposed shielding material, if relevant		N/A
	However, the glow-wire test of 750 °C or 650 °C as appropriate, is not carried out on parts of material fulfilling both or either of the following classifications:		--
	- a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N/A
	- 775 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 675 °C, for other connections		N/A
	- a glow-wire flammability index according to IEC 60695-2-12 of at least:		N/A
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	The glow-wire test is also not carried out on small parts. These parts are to:		--
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of annex E, or		N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	The consequential needle-flame test of annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		--
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		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

IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts for which the needle-flame test of annex E was applied, or		N/A
	- small parts for which a material classification of V-0 or V-1 was applied		N/A
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		-
	- parts having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- parts comprising material classified as V-0 or V-1 according to IEC 60695-11-10, or		N/A
	- parts shielded by a flame barrier that meets the needle-flame test of annex E or that comprises material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
30.2.4	Base material of printed circuit boards subjected to the needle-flame test of annex E		P
	Test not applicable to conditions as specified.....:		N/A

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	dP	Required dP	Remark
230 V; 50 Hz	480	467,5	-2,6 %	+15 %	PD20-PAET dehumidification
230 V; 50 Hz	950	873,9	-8,0 %	+5 %,-10%	PD20-PAET heating
230 V; 50 Hz	500	461,0	-7,8%	+5 %,-10%	PD20-PAET (PTC)

10.2	TABLE: Current deviation				N/A
Current deviation of/at:	I rated (A)	I measured (A)	dI	Required dI	Remark

11.8	TABLE: Heating test, thermocouples (PD20-PAET with alternative main PCB)		P
	Test voltage (V) ..... :	254,4 V/257,4 V	—
	Ambient, t_1 (°C) ..... :	Dehumidification: DB 35 °C, WB: 24 °C; Heating: DB 25 °C, WB: 22,4 °C;	—
	Ambient, t_2 (°C) ..... :		—

Thermocouple locations	T (°C)		Max. T (°C)
	Dehumidification	Heating	
Power cord	49,7	57,5	75
Air outlet temperature	51,5	57,0	90
Control panel PCB	38,5	30,2	130
Control panel	40,9	35,2	85/For cl 30.1
Internal wire for PTC heater	50,5	47,5	T105
Plastic enclosure	45,7	49,4	85/For cl 30.1
Fan motor winding	61,6	74,9	110(class B)
Fan motor running capacitor	52,7	55,8	T70
Transformer winding	72,0	76,5	110(class B)
X2 capacitor	53,0	53,2	T100
Relay of fan motor	42,7	41,0	T70
Relay of PTC heater	53,3	53,2	T70
Relay for compressor	50,9	50,7	T70

PCB	49,6	49,1	130
Varistor	54,8	54,9	T85
Self-resetting thermal cut-out	48,9	45,0	T205
Thermal link	49,4	45,9	T250
Discharge pip of compressor	57,6	50,5	Ref.
Top enclosure of compressor	60,6	54,7	150
Compressor running capacitor	49,6	55,1	T70
Internal wire to the compressor	46,6	36,7	T105
Test corner	35,4	25,4	90
Water level switch	46,2	44,7	T85

Remark: 206,8 V and 254,4 V were conducted at dehumidification, maximum value were recorded.
Heating includes the compressor mode and all heaters on with rated voltage of 1,15 times.

11.8	**TABLE: Heating test, resistance method**		P
	Test voltage (V) ..... :	254,4 V/257,4 V	—
	Ambient, t1 (°C) ..... :	Dehumidification: DB 35 °C, WB: 24 °C; Heating: DB 25 °C, WB: 22,4 °C;	—
	Ambient, t2 (°C) ..... :		—

Temperature of winding	R1 (Ω)	R2 (Ω)	T (°C)	Max. T (°C)	Insulation class
Dehumidification:					
Transformer winding (primary)	2153,3	2572,6	76,7	115	E
Transformer winding (secondary)	8,4	10,1	78,7	115	E
Fan motor winding (main)	1028	1301,5	93,5	120	B
Fan motor winding (aux.)	876	1103,2	92,7	120	B
Heating:					
Transformer winding (primary)	2153,3	2593,9	79,3	115	E
Transformer winding (secondary)	8,4	10,2	81,8	115	E
Fan motor winding (main)	1028	1320,2	98,2	120	B
Fan motor winding (aux.)	876	1124,8	99,1	120	B

Supplementary information: R1 was measured at 25 °C

13.2	TABLE: Leakage current		P
	Heating appliances: 1.15 x rated input .....:	--	—
	Motor-operated and combined appliances: 1.06 x rated voltage .....:	240 V x 1,06 = 254,4 V $1,15^{1/2}$ x 240 V= 257,4 V	—

Leakage current between	I (mA)	Max. allowed I (mA)
L,N and earthed metal enclosure	0,28	0,75
L,N and plastic enclosure	0,10 (peak)	0,35 (peak)

13.3	TABLE: Electric strength	P

Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
L,N and earthed metal enclosure	1000	No
L,N and plastic enclosure	3000	No
L/N and control panel	3000	No

16.2	TABLE: Leakage current		P
	Single phase appliances: 1.06 x rated voltage ...:	240 V x 1,06 = 254,4 V	—
	Three phase appliances 1.06 x rated voltage divided by 3:.....:	--	—

Leakage current between	I (mA)	Max. allowed I (mA)
L,N and earthed metal enclosure	0,48	0,75
L,N and plastic enclosure	0,16	0,25

16.3	TABLE: Electric strength	P

Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
L,N and earthed metal enclosure	1250	No
L,N and plastic enclosure	3000	No

24.1	**TABLE: Critical components information**				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Plug	Guangdong Xiongrun Electrical Co., Ltd.	XR-322	AC 250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40006857
(Alternative)	Zhongshan Guzhen Hongli Cable & Appliance Factory	HL-5B	AC 250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 131607
(Alternative)	Zhongshan Ke Jin Power Supply Cord Co., Ltd.	KJ-138	AC 250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40011001

(Alternative)	Zhong Shan Dong Sheng Colon Electrical Factory	CL-05	AC 250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40004757
(Alternative)	Zhongshan Xiaolan Qiangli Electric Factory Co., Ltd.	QC-002	AC 250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40014224
(Alternative)	Hong Shan Chuan Industry (Shen Zhen) Co., Ltd.	HSC-403 or HSC-402	AC 250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40021749
(Alternative)	Zhongshan Guzhen Hongli Cable & Appliance Factory	HL-28	AC250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40018857
(Alternative)	Da Zheng Wire &Cable Mfg, Ltd.	DZP-03	AC250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40015107
(Alternative)	Ningbo Qiaopu Electric Co., Ltd.	DO3	AC 250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40002872
(Alternative)	Hunan Aomeng Electrical Equipment Co. Ltd.	AM-007	AC250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40016388
(Alternative)	Kenic Electric Mfg. Co., Ltd.	KE-30	AC250V, 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40031264
(Alternative)	Zhongshan Xinsheng Electric Co., Ltd.	YT-316	250VAC; 16A	DIN VDE 0620-1 IEC 60884-1	VDE 40036804
AU plug	Hong Shan Chuan Industry (Hong Kong) Limited	HSC-502 HSC-501	AC 250V, 10A or 7.5A	AS/NZS3112: 2004 +A1 AS/NZS3112: 2011 +A1 IEC 60884-1	TUV RH TUV15589E A
(Alternative)	Zhongshan Guzhen Hongli Cable & Appliance Factory	HL-11-11 or HL-13	AC 250V, 10A	AS/NZS3112: 2004 +A1 IEC 60884-1	ESO ESO110576/ 01
Power cord	Guangdong Xiongrun Electrical Co., Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40020627
(Alternative)	Zhongshan Xiaolan Qiangli Electric Factory Co., Ltd	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 109832
(Alternative)	Shunde Ronggui Xiongrun Electrical Co., Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40006857
(Alternative)	Zhongshan Ke Jin Power Supply Cord Co., Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40013045
(Alternative)	Zhong Shan Dong Sheng Colon Electrical Factory	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40004757
(Alternative)	Zhongshan Xiaolan Qiangli Electric Factory Co., Ltd.	H05VV-F 60227 IEC 53	3G 1, 5 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40014224
(Alternative)	Awin Wire & Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40023114
(Alternative)	Da Zheng Wire &Cable Mfg. Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40004765

(Alternative)	Hunan Aomeng Electrical Equipment Co. Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 135724
(Alternative)	Ningbo Qiaopu Electric Co., Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40035976
(Alternative)	Hong Shan Chuan Industry (Shen Zhen) Co., Ltd	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40037206
(Alternative)	Zhongshan Guzhen Hongli Cable & Appliance Factory	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 139259
(Alternative)	Zhongshan Rifeng Electric Cable Co., Ltd.	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	IEC 60245-4	VDE 40015999
(Alternative)	Zhongshan Guzhen Hongli Cable & Appliance Factory	H05RN-F or H05RR-F 60245 IEC 57 60245 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	IEC 60245-4	VDE 40015521
(Alternative)	Lucky United Electric Wire & Cable Co., Ltd.	H05RN-F 60245 IEC 57	3G 0, 75 mm^2, 3G 1,0 mm^2	IEC 60245-4	VDE 40016378
(Alternative)	Zhongshan Xinsheng Electric Co., Ltd.	H05VV-F 60227 IEC 53	3G 0,75 mm^2 or 3G 1,0 mm^2	EN 50252-11 IEC 60227-5	VDE 40035262
AU power cord	Shengzhen Hong-Shan- Chuan Industry Co., Ltd	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	AS/NZS 60227.5	SAI SAI-400010
(Alternative)	Zhongshan Guzhen Hongli Cable & Appliance Factory	H05VV-F 60227 IEC 53	3G 0, 75 mm^2, 3G 1,0 mm^2	AS/NZS3191: 2008	ESO ESO110501/ 00
Compressor PD10-PAyz, PD12-PAyz	Tatung Co., Ltd.	FE140Y-E	220-240V, 50Hz, R134a	EN/IEC 60335-1 EN/IEC 60335-2-34	TUV RH R 09754237
Compressor for PD16-PAyz	Tatung Co., Ltd.	FH250Y2-E	220-240V, 50Hz, R134a	EN/IEC 60335-1 EN/IEC 60335-2-34	TUV RH R 09754237
Compressor for PD20-PAyz	Tatung Co., Ltd.	FH300Y2-E	220-240V, 50Hz, R134a	EN/IEC 60335-1 EN/IEC 60335-2-34	TUV RH R 09754237
Capacitor for Compressor FH250Y2-E, FH300Y2-E,	New Tech Electronic Co., Ltd.	CBB61-P2	450V or 400V AC; 4,0µF; T85 or T70; P2; C	IEC/EN 60252-1	TUV RH R50246603
(Alternative)	New Tech Electronic Co., Ltd.	CBB61-P2	450V or 400V AC;4,0µF; T85 or T70; P2; B	IEC/EN 60252-1	TUV RH R50285501
(Alternative)	Shunde Dahua Electric Co., Ltd.	CBB61 (CBB6-1)	450V or 400V AC; 4,0µF; T85 or T70; P2; C	IEC/EN 60252-1	TÜV Rh R 50033889
(Alternative)	Sheng Ye Electrical Co., Ltd	C61-P2-xy x=1,2; y=1,2	450V or 400V AC; 4,0µF; T85 or T70; P2; C	IEC/EN 60252-1	TÜV Rh R 50010886
(Alternative)	Sheng Ye Electrical Co., Ltd.	C61-P2-xy (xy=31,32,41,42)	450V or 400VAC, 4,0µF, T85 or T70, P2, B or C	IEC/EN 60252-1	TUV PS B130573204 005

(Alternative)	Guangdong Fengming Electronic Tech. Co., Ltd	CBB61-P2	450V or 400V AC; 4,0μF; T85 or T70; P2; C	IEC/EN 60252-1	TUV Rh R 50163114
(Alternative)	Guangdong Fengming Electronic Tech. Co., Ltd	CBB61-P2	450V or 400VAC, 4,0μF, T85 or T70, P2, B	IEC/EN 60252-1	TUV RH 50274996
(Alternative)	Shunde Kesheng Electronic Co., Ltd	CBB61S	450V AC; 4,0 μF; T85 or T70; P2; B	IEC/EN 60252-1	TUV Rh R50276081
(Alternative)	New Tech Electronic Co., Ltd.	CBB 65	450VAC; 4,0 μF; T70; P2; C	IEC/EN 60252-1	VDE 133580
(Alternative)	New Tech Electronic Co., Ltd.	CBB65	400VAC or 450VAC; 4,0 μF; T85 or T70; P2; B or C	IEC/EN 60252-1	TUV Rh R 50181282
(Alternative)	Sheng Ye Electrical Co., Ltd.	CBB 65	450VAC; 4,0μF; T70 or T85; P2; C	IEC/EN 60252-1	VDE 126534
(Alternative)	Sheng Ye Electrical Co., Ltd.	CBB 65	450VAC; 4,0μF; T70 or T85; P2; B or C	IEC/EN 60252-1	TUV SUD B100773204 001
(Alternative)	Guangdong Fengming Electronic Tech. Co., Ltd.	CBB 65	450VAC; 4,0μF; T70 or T85, P2, C	IEC/EN 60252-1	TUV Rh R50174485
Fan motor for PD10-PAyz, for PD12-PAyz	Zhongshan Lian Da Co., Ltd.	MD70-3	230VAC, 50Hz , Class B	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested With appliance
Fan motor for PD16-PAyz, for PD20-PAy	Zhongshan Lian Da Co., Ltd.	MD60-3	230VAC, 50Hz , Class B	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested With appliance
Overload protector for all motor	Hubei Honghu Blue Light Electronic Co., Ltd.	RH130-2	250VAC, 2A, Tf130°C	IEC/EN 60730-1 IEC/EN 60730-2-2	VDE 40019233
(Alternative)	Hubei Honghu Blue Light Electronic Co., Ltd.	RH130-2	250VAC, 2A, Tf130°C	IEC/EN 60730-1 IEC/EN 60730-2-2	TUV R50077755
(Alternative)	Aupo Electronics Ltd.	A4	250VAC, 2A, Tf130°C	IEC/EN 60730-1 IEC/EN 60730-2-2	VDE 40005586
(Alternative)	Aupo Electronics Ltd.	A4-F	250VAC, 2A, Tf130°C	IEC/EN 60730-1 IEC/EN 60730-2-2	VDE 40008720
(Alternative)	Xiamen Set Electronics Co., Ltd.	K4	250VAC, 2A, Tf130°C	IEC/EN 60730-1 IEC/EN 60730-2-2	TUVRH 50161772
(Alternative)	Hubei Honghu Blue Light Electronic Co., Ltd.	RH115-2	250VAC, 2A, Tf115°C	IEC/EN 60730-1 IEC/EN 60730-2-2	VDE 40019233
(Alternative)	Hubei Honghu Blue Light Electronic Co., Ltd.	RH115-2	250VAC, 2A, Tf115°C	IEC/EN 60730-1 IEC/EN 60730-2-2	TUV R50077755
(Alternative)	Aupo Electronics Ltd.	A2	250VAC, 2A, Tf115°C	IEC/EN 60730-1 IEC/EN 60730-2-2	VDE 40005586

(Alternative)	Aupo Electronics Ltd.	A2-F	250VAC, 2A, Tf115°C	IEC/EN 60730-1 IEC/EN 60730-2-2	VDE 40008720
(Alternative)	Xiamen Set Electronics Co., Ltd.	K2	250VAC, 2A, Tf115°C	IEC/EN 60730-1 IEC/EN 60730-2-2	TUVRH 50161772
Thermal protector for MD60-3	Changzhou New Zone Desheng Electric Appliance Co., Ltd.	BR Series	AC250V, Tf: 130°C, operation cycles: 3000	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 40015893
(Alternative)	Changzhou New Zone Desheng Electric Appliance Co., Ltd.	17AM Series	AC250V, Tf: 130°C, operation cycles: 3000	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 40016509
(Alternative)	Changzhou New Zone Desheng Electric Appliance Co., Ltd.	BW Series	AC250V, Tf: 130°C, operation cycles: 3000	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 40015893
(Alternative)	Sensata Technologies Hollang B.V	8CM	AC250V, Tf: 130°C, operation cycles: 3000	EN/IEC 60730-1 EN/IEC 60730-2-2	ENEC 2014531.02
(Alternative)	Changzhou City Changlian Radio Co.,Ltd	KW Series	AC 250V, Tf: 130°C, operation cycles: 3000	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 40010692
(Alternative)	Guangzhou Guangbao Electrical Equipment Co., Ltd.	T11-U	AC 250V, Tf: 130°C, operation cycles: 3000	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 40001200
(Alternative)	Dongguan Kain Electronic Sci. & Tech. Co., Ltd.	BW-A1D, BW-B2D	AC250V, Tf 130°C, Operation cycles: 3000	IEC/EN 60730-1 IEC/EN 60730-2-2	VDE 40031453
Micro switch	Saia-Burgess Electronics Ag	X3C	250V, 10(3)A, 5E4, T125	IEC/EN 61058-1	ENEC 99-03462/A1
(Alternative)	Saia-Burgess Electronics Ag	X3M	16(6)A 250Va.c., Operation cycles: 5E4,T125	IEC/EN 61058-1	ENEC 99-03462/A1
(Alternative)	Toneluck Electronics Industrial Ltd	MQS-216	250V AC; 16(4) A 5E4, T85	IEC/EN 61058-1	ENEC 1579
(Alternative)	Yueqing Dongnan Electronics Co., Ltd.	KW3A	250V AC; 16(4)A 5E4,T105	IEC/EN 61058-1	ENEC 00323/VDE4 0022705
(Alternative)	Foshan Shunde Yuanfeng Metal Electrical Appliances Co., Ltd.	MS4-16Z	250V AC; 16(4)A 5E4,T105	IEC/EN 61058-1	TUV R 50223406
(Alternative)	Huiyang Zing Ear Industry Co.,Ltd	G5T16	250V AC; 16(4)A 5E4, T125	IEC/EN 61058-1	ENEC 184546

(Alternative)	Guangdong Hushun Electrical Appliance Co., Ltd	LXW-16-1-3/ LXW-16-2-3/ LXW-16-3-3	250V AC; 16 A 10E3, T125	IEC/EN 61058-1	VDE 40028157
Capacitor for fan motor (MD60-3,)	New Tech Electronic Co., Ltd.	CBB61-P2	450V or 400V AC; 0,8µF; T85 or T70; P2; C	IEC/EN 60252-1	TUV RH R50246603
(Alternative)	New Tech Electronic Co., Ltd.	CBB61-P2	450V or 400V AC;0,8µF; T85 or T70; P2; B	IEC/EN 60252-1	TUV RH R50285501
(Alternative)	Shunde Dahua Electric Co., Ltd.	CBB61 (CBB6-1)	450V or 400V AC; 0,8µF; T85 or T70; P2; C	IEC/EN 60252-1	TÜV Rh R 50033889
(Alternative)	Sheng Ye Electrical Co., Ltd.	C61-P2-xy x=1,2; y=1,2	450V or 400V AC; 0,8µF; T85 or T70; P2; C	IEC/EN 60252-1	TÜV Rh R 50010886
(Alternative)	Sheng Ye Electrical Co., Ltd.	C61-P2-xy (xy=31,32,41,42)	450V or 400VAC, 0.8µF, T85 or T70, P2, B or C	IEC/EN 60252-1	TUV PS B130573204005
(Alternative)	Guangdong Fengming Electronic Tech. Co., Ltd	CBB61-P2	450V or 400V AC; 0,8µF; T85 or T70; P2; C	IEC/EN 60252-1	TUV Rh R 50163114
(Alternative)	Guangdong Fengming Electronic Tech. Co., Ltd	CBB61-P2	450V or 400VAC, 0,8µF, T85 or T70, P2, B	IEC/EN 60252-1	TUV RH 50274996
(Alternative)	Shunde Kesheng Electronic Co., Ltd	CBB61S	450V AC; 0,8 µF; T85 or T70; P2; B	IEC/EN 60252-1	TUV Rh R50276081
Material of PCB	Shenzhen Weigao Electronics Co., Ltd.	WLG-1	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E234479
(Alternative)	Kingboard Laminates (Macao Commercial Offshore) Ltd	KB-5150 or KB	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E123995
(Alternative)	Zhaoyuan Jinbao Electronics Co., Ltd.	ZD-90F or ZD	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E141940
(Alternative)	Zhaoyuan Jinbao Electronics Co., Ltd.	ZD-95(G)F	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E141940
(Alternative)	Kingboard Laminates (Macao Commercial Offshore) Ltd	KB V-0	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E123995
(Alternative)	Zhaoyuan Jinbao Electronics Co., Ltd.	ZD V-0	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E141940
(Alternative)	Guangzhou Timesquick Electronic Co., Ltd	SD-M	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E315225

(Alternative)	Guangzhou Timesquick Electronic Co., Ltd	SD-BQ	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E315225
(Alternative)	Zhongshan Yichunda Electronic Co., Ltd.	YCD-1	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E322701
(Alternative)	Zhongshan Chengye Pcb Co., Ltd.	001 or 002 or 003	94V-0, 1,6mm thickness	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E245652
Transformer for 800166 Series, 800327 Series	Zhong Shan Lian-Da Co., Ltd.	EI-35	Input: AC230V 50/60Hz, Output: AC 12V 300mA, Class E	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested With appliance
Thermal link built in transformer	Hubei Honghu Blue Light Electronic Co., Ltd.	RH130-2	250VAC, 2A, Tf 130°C	IEC/EN 60691	TUV R50077755
(Alternative)	Hubei Honghu Blue Light Electronic Co., Ltd.	RH130-2	250VAC, 2A, Tf 130°C	IEC/EN 60691	VDE 40019233
(Alternative)	Aupo Electronics Ltd.	A4	250VAC, 2A, Tf130°C	IEC/EN 60691	VDE 40005586
(Alternative)	Aupo Electronics Ltd.	A4-F	250VAC, 2A, Tf130°C	IEC/EN 60691	VDE 40005586
(Alternative)	Xiamen Set Electronics Co., Ltd.	K4	250VAC, 2A, Tf130°C	IEC/EN 60691	TUVRH 50086377
Varistor for PDx-PAM1z, PDx-PAEz	Hongzhi Enterprises Ltd.	HEL-14D471K, HEL-7D471K, HEL-10D471K	470V, T85°C	IECEN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40008621
(Alternative)	Hongzhi Enterprises Ltd.	HEL-14D561K, HEL-10D561K, HEL-7D561K,	560V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40008621
(Alternative)	Xianhua Advanced Sensitive Components Co., Ltd.	FNR-14K471, FNR-07K471 , FNR-10K471K	470V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40008242
(Alternative)	Xianhua Advanced Sensitive Components Co., Ltd.	FNR-07K561K FNR-10K561K FNR-14K561K	560V, T85°C	IECEN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40008242
(Alternative)	Joyin Co., Ltd.	14N471K, 7N471K 10N471K	470V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 005937
(Alternative)	Joyin Co., Ltd.	14N561K, 7N561K 10N561K	560V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 005937
(Alternative)	Thinking Electronic Industrial Co., Ltd.	TVR 14471 TVR 07471 TVR 10471	470V, T85°C	IECEN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 005944
(Alternative)	Thinking Electronic Industrial Co., Ltd.	TVR 14561 TVR 07561 TVR 10561	560V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 005944

(Alternative)	Shantou High-New Technology Dev. Zone Songtian Enterprise Co.,Ltd.	STE-14D471K, STE-07D471K STE-10D471K,	470V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40023049
(Alternative)	Shantou High-New Technology Dev .Zone Songtian Enterprise Co., Ltd.	STE-14D561K, STE-07D561K STE-10D471K,	560V, T85°C	IECEN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40023049
(Alternative)	Dongguan Littelfuse Electronics Co., Ltd.	471KD14, 471KD10 471KD07	470V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40026161
(Alternative)	Dongguan Littelfuse Electronics Co., Ltd.	561KD14, 561KD10 561KD07	560V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40026161
(Alternative)	Centra Science Corp	CNR-14D471K, CNR-10D471K CNR-07D471K	470V, T85°C	IECEN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40008220
(Alternative)	Centra Science Corp	CNR-07D561K CNR-10D561K CNR-14D561K	560V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40008220
(Alternative)	Lien Shun Technical Co., Ltd.	14D471K, 10D471K, 07D471K	470V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40005858
(Alternative)	Lien Shun Technical Co., Ltd.	14D561K, 10D561K, 07D561K	560V, T85°C	IECEN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40005858
(Alternative)	Brightking Inc.	561K D07, 561K D10 561K D14	560V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40022070
(Alternative)	Brightking Inc.	471K D07, 471K D10 471K D14	470V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40022070
(Alternative)	Guangxi New Future Information Industry Co., Ltd.	14D471K , 07D471K 10D471K	470V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40030322
(Alternative)	Guangxi New Future Information Industry Co., Ltd.	14D561K , 07D561K 10D561K	560V, T85°C	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE 40030322
X2 capacitor for PDx-PAM1z,PDx-PAEz	Shenzhen Su Rong Electronic Co., Ltd.	X2	X2, AC 280V, 0,1µF, T100°C	IEC/EN 60384-14	VDE 40008924
(Alternative)	Tenta Electric Industrial Co., Ltd.	MEX	X1, AC300V, 0,1µF, T100°C	IEC/EN 60384-14	VDE 123198
(Alternative)	Tenta Electric Industrial Co., Ltd.	MEX	X2, AC275V, 0,1µF, T100°C	IEC/EN 60384-14	VDE 119119
(Alternative)	Llow Gu Electronics Industry Co., Ltd	GS-L	X2, AC275V, 0,1µF, T100°C	IEC/EN 60384-14	VDE 101345
(Alternative)	Carli Electronics Co., Ltd.	MPX	X2, AC275V, 0,1µF, T100°C	IEC/EN 60384-14	VDE 40008520

(Alternative)	Ultra Tech Enterprise Xiphi Co., Ltd.	HQX	X2, AC275V, 0,1µF, T100°C	IEC/EN 60384-14	VDE 40015608
(Alternative)	Dain Electronics Co., Ltd.	MPX	X2, AC275V, 0,1µF, T100	IEC/EN 60384-14	VDE 40018798
(Alternative)	Dain Electronics Co., Ltd.	MPX	X2, AC275V, 0,1µF, T110°C	IEC/EN 60384-14	VDE 40018798
(Alternative)	Dongguan City Jurcc Electronics Co. Ltd	MPX or MKP	X2, AC275V, 0,1µF, T110°C	IEC/EN 60384-14	VDE 40034920
(Alternative)	Jimson Electronics (Xiamen) Co., Ltd.	MKP	X2, AC275V, 0,1µF, T110°C	IEC/EN 60384-14	VDE 40000463
(Alternative)	Ultra Tech Enterprise Xiphi Co., Ltd.	HQX	X2, AC275V, 0,1µF, T100°C	IEC/EN 60384-14	VDE 40015608
Main Controller PCB for PDx-PAM1z	**--**	**800327 Series**	**--**	**IEC/EN 60335-1 IEC/EN 60335-2-40**	**Tested With appliance**
Main Controller PCB for PDx-PAEz	**--**	**800308 Series**	**--**	**IEC/EN 60335-1 IEC/EN 60335-2-40**	**Tested With appliance**
Main Controller PCB for PDx-PAM1z and PDx-PAEz (Alternative)	**--**	**800166 Series**	**--**	**IEC/EN 60335-1 IEC/EN 60335-2-40**	**Tested With appliance**
Fuse on Main Controlle PCB for 800308 Series, 800327 Series	**Zhong Shan Lan Bao Electrical Appliances**	**RTI-20**	**T 3,15A or 2A, L, AC 250V**	**IEC/EN 60127-1 IEC/EN 60127-2**	**VDE 40012120**
(Alternative)	**Zhong Shan Lan Bao Electrical Appliances**	**RFI-20**	**F, 3,15A or 2A, L, AC 250V**	**IEC/EN 60127-1 IEC/EN 60127-2**	**VDE 40012079**
(Alternative)	**XC Electronics (Shen Zhen) Corp. Ltd.**	**3T**	**T, 3,15A or 2A, 250V AC**	**IEC/EN 60127-1 IEC/EN 60127-2**	**VDE 40019614**
(Alternative)	**Suzhou Littelfuse OVS Ltd**	**618 Series**	**T or F ,3,15A or 2A, 250V AC**	**IEC/EN 60127-1 IEC/EN 60127-2**	**VDE 40014776**

(Alternative)	Walter Electronic Co., Ltd	FSD	T or F ,3,15A or 2A, 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40001373
(Alternative)	Shenzhen Lanson Elctronics Co., Ltd	5J	T or F ,3,15A or 2A , 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40009306
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd.	3F	F,3,15A or 2A, L, AC 250V	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40019636
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd.	5T	T or F ,3,15A, or 2A, 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40009610
(Alternative)	Hollyaad Co., Ltd	50T /50F	T or F ,3,15A or 2A , 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40014460
(Alternative)	Hollyland Company Limited	50T/50F	3,15A or 2A, 250V AC, T or F	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40014477
Fuse on Main Controlle PCB for 800166 Series	Zhong Shan Lan Bao Electrical Appliances	RTI-20	T, 3,15A or 6,3A, L, AC 250V	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40012120
(Alternative)	Zhong Shan Lan Bao Electrical Appliances	RFI-20	F, 3,15A or 6,3A, L, AC 250V	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40012079
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd.	3T	T, 3,15A or 6,3A , 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40019614
(Alternative)	Suzhou Littelfuse OVS Ltd	618 Series	T or F ,3,15A or 6,3A, 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40014776
(Alternative)	Walter Electronic Co.,Ltd	FSD	T or F ,3,15A or 6,3A , 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40001373
(Alternative)	Shenzhen Lanson Elctronics Co.,Ltd	5J	T or F ,3,15A or 6,3A , 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40009306
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd.	3F	F,3,15A or 6,3A, L, AC 250V	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40019636
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd.	5T	T or F ,3,15A, or 6,3A, 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40009610
(Alternative)	Hollyland Co., Ltd.	50T /50F	T or F ,3,15A or 6,3A, 250V AC	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40014460
(Alternative)	Hollyland Co., Ltd.	50T/50F	3,15A or 6,3A, 250V AC, T or F	IEC/EN 60127-1 IEC/EN 60127-2	VDE 40014477
Relay for PDx-PAM1z,PDx-PAEz	Chengdu Tongda Relay Manufacturing Co., Ltd.	JZC-8F	250VAC, 5A, 100000 cycles, T85	IEC/EN 61810-1	TUVRH R 02156493

(Alternative)	Shaanxi Qunli Radio Appliance Factory	JZC-11F	AC 250V, 5A, 100000 cycles, T85	IEC/EN 61810-1	TUV RH R50100487
(Alternative)	Xiamen Hongfa Electroacoustic Co., Ltd.	JZC-32F	AC 250V, 5A, 100000 cycles, T70	IEC/EN 61810-1	VDE 40012204
(Alternative)	Xiamen Hongfa Electroacoustic Co., Ltd	JZC-33F	5A or 3A 250VAC, 100000 cycles, T85	IEC/EN 61810-1	VDE 125661
(Alternative)	Chengdu Tongda Relay Manufacturing Co., Ltd.	JQC-3F	AC250V 10A, 100000 cycles, T70	IEC/EN 61810-1	TUV RH R50039295
(Alternative)	Shaanxi Qunli Radio Appliance Factory	JQC-3FB	AC 240V, 7A, 100000 cycles, T70	IEC/EN 61810-1	TUV RH R50100487
(Alternative)	Shaanxi Qunli Radio Appliance Factory	JQC-3FB	AC 240V, 10A, 100000 cycles, T85	IEC/EN 61810-1	TUV RH R50100487
(Alternative)	Shaanxi Qunli Radio Appliance Factory	JQC-3FB	AC240V, 10A, 100000 cycles, T85	IEC/EN 61810-1	TUVRH R 09933044
(Alternative)	Yueqing Meishuo Electric Co., Ltd.	MPA-S-112-A	AC250V,10A, 100000 cycles, T85	IEC/EN 61810-1	TUV R 50184948
(Alternative)	Dongguan Sanyou Electrical Appliances Co., Ltd	SJ-S-112DM	AC250V, 3A or 5A, 100000 cycles, T85	IEC/EN 61810-1	VDE 4002146
(Alternative)	Yueqing Meishuo Electric Co., Ltd.	MPD-S-112-A	AC250V, 5A, 100000 cycles, T85	IEC/EN 61810-1	TUV R 50184948
(Alternative)	Dongguan Sanyou Electrical Appliances Co., Ltd	SJ-S-112D	AC250V, 3A or 5A, 100000 cycles, T85	IEC/EN 61810-1	VDE 4002146
(Alternative)	Dongguan Sanyou Electrical Appliances Co., Ltd	SJ-S-112DMH	AC250V, 10A, 100000 cycles, T85	IEC/EN 61810-1	VDE 4002146
(Alternative)	Dongguan Sanyou Electrical Appliances Co., Ltd	SJ SERIES	AC250V, 3A or 5A or 10A, 100000 cycles, T85	IEC/EN 61810-1	VDE 4002146
(Alternative)	Dongguan Sanyou Electrical Appliances Co., Ltd	SRD series	250VAC,7A or 10A, 100000 cycles, T85	IEC/EN 61810-1	TUV RH R50142424
(Alternative)	Dongguan Sanyou Electrical Appliances Co., Ltd	SRD-S-112DM	250VAC,7A or 10A, 100000 cycles, T85	IEC/EN 61810-1	TUV RH R50142424
(Alternative)	Xiamen Hongfa Electroacoustic Co., Ltd.	JQC-3FF	AC 250V, 5A or 8A, 100000 cycles, T85	IEC/EN 61810-1	TUV RH R50148356
(Alternative)	Xiamen Hongfa Electroacoustic Co., Ltd.	JQC-3FF	AC 277V, 10A, 100000 cycles, T85	IEC/EN 61810-1	TUV RH R50148356

(Alternative)	Shenazhen Golden Electrical Appliance Co.,Ltd.	GA-1A	5A, 100000 cycles, T70	IEC/EN 61810-1	TUV R50079533
(Alternative)	Anhui Ming Guang Life Electronic Co., Ltd.	BJ-SS-112DMF	250VAC; 10A; T85; 10E4 cycles	IEC/EN 61810-1	TUV Rh R 50183595
(Alternative)	Anhui Ming Guang Life Electronic Co., Ltd.	BJ-SS-112DM	250VAC; 5A; T85; 10E4 cycles	IEC/EN 61810-1	TUV Rh R 50183595
(Alternative)	Anhui Ming Guang Life Electronic Co., Ltd.	BJ series	250VAC; 5A or 8A or 10A; T85; 10E4 cycles	IEC/EN 61810-1	TUV Rh R 50183595
(Alternative)	Anhui Mingguang Life Electronic Co., Ltd.	BRF-SS-112DM	250VAC; 17A; T85; 10E4 cycles	IEC/EN 61810-1	TUV Rh R 50208738
(Alternative)	Anhui Mingguang Life Electronic Co., Ltd.	BRF-SS-112D	250VAC; 17A; T85; 10E4 cycles	IEC/EN 61810-1	TUV Rh R 50208738
PTC heater for PDx-PAM1T, PDx-PAET	Zhongshan Lian Da Co., Ltd.	---	500W, 220-240V 50Hz	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance
Self-resetting thermal cut-out for PTC Heater	Zhejiang Dongyang Hengdian Thermal Protector Factory	KSD Series	250VAC, 5A, Open temperature:85 °C T150	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 139430
(Alternative)	Tongbao-Hualong Controls Co., Ltd.	KSD Series	250VAC, 5A or 10A, Open temperature: 85°C, T190	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 40011625
(Alternative)	Sensata Technologies Holland,B.V	1NT	240VAC, 10A,Open temperature:85 °C T204	EN/IEC 60730-1 EN/IEC 60730-2-2	ENEC 2014531.16
(Alternative)	Zhongshan Yong Jian Thermostat Factory	KSD Series	250VAC, 10A, Open temperature: 85°C, T170	EN/IEC 60730-1 EN/IEC 60730-2-2	VDE 134996
Thermal link for PTC Heater	Therm-O-Disc Europe B.V.Gulberg 33	G4 Series	250VAC, 10A, Tf 110°C	IEC/EN60691	VDE 40017228
(Alternative)	Therm-O-Disc Europe B.V.Gulberg 33	E4 Series	250VAC, 10A, Tf 110°C	IEC/EN60691	VDE 40017228
(Alternative)	Zhongshan Sheng Ping Thermal Protectors Co., Ltd.	SPF 106	250VAC, 10A, Tf 108°C	IEC/EN60691	VDE 40004430
(Alternative)	Aupo Electronics Ltd.	AF 104	250Vac, 10A, Tf 104°C	IEC/EN60691	VDE 40005418
(Alternative)	Aupo Electronics Ltd.	BF 104	250VAC, 10A, Tf 104°C	IEC/EN60691	VDE 40005418

Thermostat switch PDx-PARB	Guangzhou Jintong Industry Co., Ltd.	GWL-xyz series	250VAC; 20A Operation cycles: 1E5, T70	EN/IEC 60730-1 EN/IEC 60730-2-9	TUV R 50068189
(Alternative)	Foshan Tongbao Co., Ltd.	WK***-***-****	250VAC; 20A Operation cycles: 1E5, T60	EN/IEC 60730-1 EN/IEC 60730-2-9	VDE 40011452
Humidity switch for PDx-PARB	Tecx-Unions Technology Corporation	TW2001R-A	AC 240V; 50Hz; Operation cycles: 6000	EN/IEC 61058-1	VDE 40004882
(Alternative)	Auone Electronic Manufacturing Ltd	H4600D,H4600E	AC 250V; 50Hz; 10A;Operation cycles: 10E4;	EN/IEC 61058-1	TUV PS B131175998004
Internal wire for motor and Compressor and PTC	Lu Chiang Electric Wire & Cable Industrial Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E72332
(Alternative)	Dongguan Guneetal Wire & Cable Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E204204
(Alternative)	Xinya Electronic Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E170689
(Alternative)	Zhongshan Dongfeng Zhoushishenlong Electronic Wire Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E257280
(Alternative)	Foshan Zhuo Sheng Green Wire Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E251755
(Alternative)	Zhong Shan Kenda Electrical Factory	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E216895
(Alternative)	Shunde Yonggao Electric Appliance Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E178844
(Alternative)	Heshan City Tehsing Huanchiu Electric Cable Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E229340
(Alternative)	Zhong Shan Yong Roi Electric Factory Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E204893
(Alternative)	Zhongshan City Senbao Electric Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E199818
(Alternative)	Guang Dong Xin Long Enterprise Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E207567

(Alternative)	Shanghai Sumin Wire Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E212872
(Alternative)	Zhongshan Hualan Electronic Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E303124
(Alternative)	Rei Hsing Wire Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E108485
(Alternative)	Da Zheng Wire & Cable Mfg Ltd	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E256597
(Alternative)	Dong Guang Hu Men Wan Tong Electric Wire Factory	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E218585
(Alternative)	Zhongshan Nantou Boyu Wire Mfr	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E314089
(Alternative)	Dongguan Yue Yang Wire & Cable Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E230810
(Alternative)	Zhong Shan Shen Wan Fu Yuan Tong Wire & Cable Factory	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E241989
(Alternative)	Mainland Electric Wire & Cable Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E242365
(Alternative)	Zhong Shan Dong Sheng Colon Electrical Factory	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E256599
(Alternative)	Foshan Shunde Yonggaolian Wire & Cable Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E314925
(Alternative)	Linoya Electronic Technology Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E315619
(Alternative)	Zhongshan Xinsheng Electric Co., Ltd.	1015	16-24AWG, 105 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E328303
(Alternative)	Shenzhen Woer Heat-Shrinkable Material Co., Ltd.	3321	16-24AWG, 150 °C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested with appliance UL E227566
(Alternative)	Shenzhen Mysun Insulation Materials Co., Ltd.	UL 3123	16-24AWG, 600VAC, 150°C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested With appliance UL E239689
(Alternative)	Shenzhen Mysun Insulation Materials Co., Ltd.	UL 3122	16-24AWG, 300VAC, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested With appliance UL E239689
(Alternative)	Shenzhen Mysun Insulation Materials Co., Ltd.	UL 3135	16-24AWG, 300VAC, 200°C	IEC/EN 60335-1 IEC/EN 60335-2-40	Tested With appliance UL E239689
Supplementary information:					

28.1	TABLE: Threaded part torque test		P
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Screw for earthing terminal	3,9	II	1,2

29.1	TABLE: Clearances					P
	Overvoltage category.. :	II				
		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic	Functional	Supplementary	Reinforced	Verdict / Remark
330	0,5	--	--	--	--	N/A
500	0,5	--	--	--	--	N/A
800	0,5	--	--	--	--	N/A
1 500	0,5	--	--	--	--	N/A
2 500	1,5	--	--	--	--	N/A
2 500	**1,5**	--	**F1**	--	--	P
4 000	3,0	--	--	--	--	N/A
6 000	5,5	--	--	--	--	N/A
8 000	8,0	--	--	--	--	N/A
10 000	11,0	--	--	--	--	N/A
Remark: F1: Between L and N on PCB: 4,5 mm;						

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	Creepage distance (mm) Pollution degree							
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb	Verdict / Remark
≤50	0,2	0,6	0,8	1,1	1,4	1,6	1,8	N/A
>50 and ≤125	0,3	0,7	1,0	1,4	1,8	2,0	2,2	N/A
>125 and ≤250	0,4	1,0	1,4	2,0	2,5	2,8	3,2	N/A
>125 and ≤250	0,4	1,0	1,4	2,0	2,5	2,8	**3,2**	P
>250 and ≤400	0,8	1,6	2,2	3,2	4,0	4,5	5,0	N/A
>400 and ≤500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A
Remark: F1: Between L and N on PCB: 4,5 mm								

TABLE 30	RENSISTANCE TO HEAT, FIRE AND TRACKING (appended table)													P
Component	Manufacturer	Type	Ball pressure test				Tracking test [CTI/ PTI]	Glow wire test					Needle-flame test	Verdict
			75°C	cl. 11 +40°C	125°C	cl. 19 +25°C		GWT 550°C	GWT 650°C	GWT 750°C	GWFI 850°C	GWIT		
All Relay	--	--	--	--	--	--	--	--	--	0	X	--	--	P
All PCB	--	--	--	--	--	--	--	--	--	--	--	--	X	P
Motor capacitor	--	--	--	--	--	--	--	--	--	0	X	--	--	P

[1] Flame persisting longer than 2 s
[2] Surrounding parts are subjected to the needle-flame test of annex E
[3] These parts subjected to the needle-flame test of annex E
[4] Adjacent parts subjected to the needle-flame test of annex E
[5] Parts of material classified as V-0 or V-1
[6] Base material classified as V-0
supplementary information:

---End of Report---

Attachment 2 Photo documentation
Report No.: GZES141101339802A1 Page 1 of 1

Type of equipment, model: Dehumidifier / PDx-PAyz
(x=10, 12, 16, 20; y=E, M1, RB, z=Blank, T (when x=16, 20; y=E, M1))

Details of: Alternative main PCB with transformer

View:

☒ general

☐ front

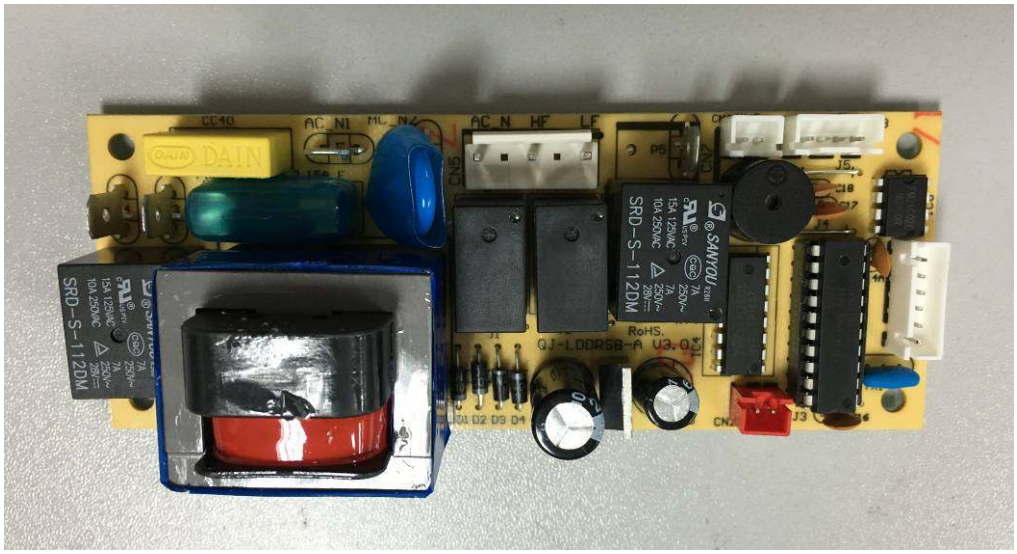
☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: Alternative main PCB lay-out with transformer

View:

☒ general

☐ front

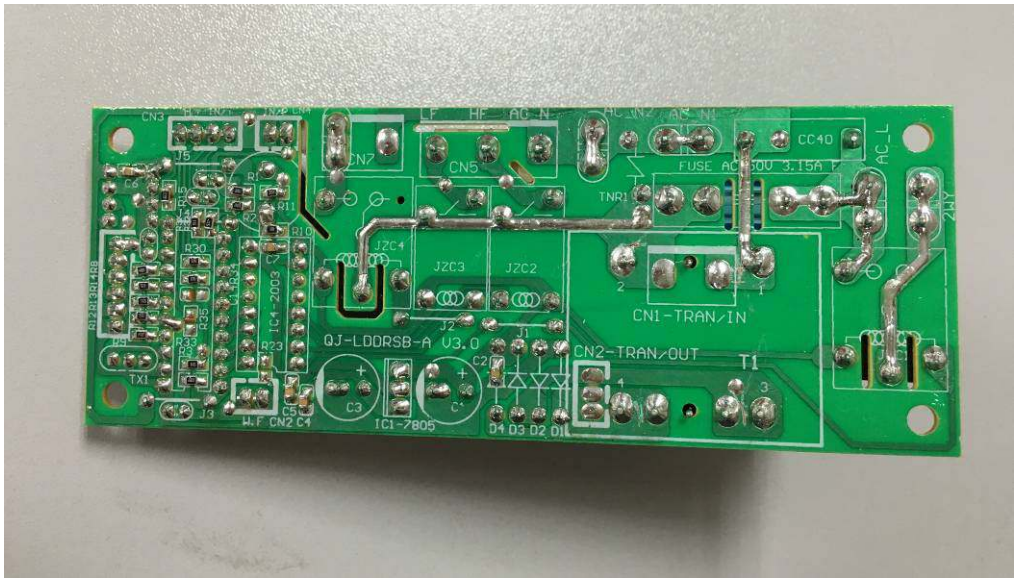
☒ rear

☐ right

☐ left

☐ top

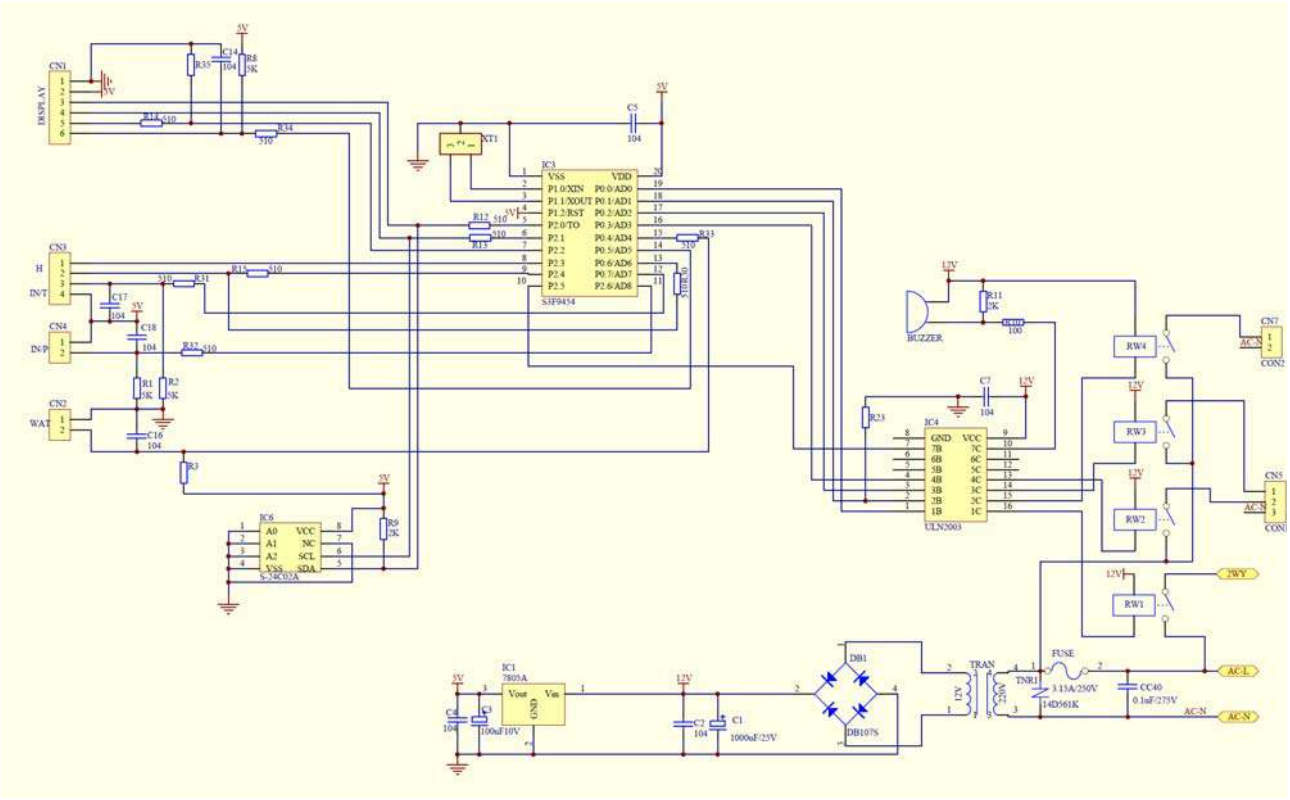
☐ bottom



--- End of Attachment 2 ---

Circuit diagram documents

Alternative main PCB with transformer:



---End of Attachment 3---

Attachment 4

Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-1 Household and similar electrical appliances – Safety – Part 1: General requirements	
Differences according to:	EN 60335-1:2012/ A11: 2014
Attachment Form No.:	EN 60335-1/A11
Attachment Originator:	SGS-CSTC
Master Attachment:	Date 2014-09

7.14	In NOTE Z1, replace "IEC 82079-1" by "EN 82079-1".		P
Annex ZF	In Table ZF.1 – List of standards under CLC/TC 61, replace line of EN 60335-2-38 by the following: EN 60335-2-38, Commercial electric griddles and griddle grills with moving parts		N/A

--- End of Attachment 4 ---

Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-1
Household and similar electrical appliances – Safety –
Part 1: General requirements

Differences according to:	IEC 60335-1:2010 / A1: 2013
Attachment Form No.:	IEC60335-1/A1_B
Attachment Originator:	SGS-CSTC
Master Attachment:	Date 2014-09

IEC 60335-1: 2010 / A1: 2013			
7	Marking and instructions		—
7.1	Add the following new paragraph after Note 4: Class II appliances and class III appliances incorporating a functional earth shall be marked with the symbol IEC 60417-5018 (2011-07).		N/A
7.3	In Note 3, replace the text of the example by the following. EXAMPLE: 230 V /400 V 3N : The appliance is only suitable for the voltage values indicated, 230 V being for single-phase, a.c. operation and 400 V 3N for three-phase, a.c. with neutral operation (an appliance with terminals for both supplies).		N/A
7.4	Replace the requirement by the following: If the appliance can be adjusted for different rated voltages or rated frequencies, the voltage or the frequency to which the appliance is adjusted shall be clearly discernible. If frequent changes in voltage setting or frequency setting are not required, this requirement is considered to be met if the rated voltage or rated frequency to which the appliance is to be adjusted can be determined from a wiring diagram fixed to the appliance.		N/A
7.6	Replace [symbol ISO 7000-0434 (2004-01)] by [symbol ISO 7000-0434A (2004-01)		N/A
7.8	Add the following to the first paragraph of the requirement: – functional earthing terminals shall be indicated by symbol IEC 60417-5018 (2011-07).		N/A
7.12	Delete “for use” in the first paragraph and in the Note. Add the following after the existing last paragraph of the requirement: For appliances intended for use at altitudes exceeding 2 000 m, the maximum altitude of use shall be stated.		N/A
	The instructions for appliances incorporating a functional earth shall state the substance of the following: This appliance incorporates an earth connection for functional purposes only.		N/A

Clause	Requirement - Test	Result - Remark	Verdict
7.12.1	Add the following text: For appliances marked with different rated voltages or different rated frequencies (separated by a /), instructions shall be included to indicate to the user or installer what action must be taken to adjust the appliance for operation at the required rated voltage or rated frequency.		N/A
7.15	Add the following: The symbol IEC 60417-5018 (2011-07) shall be placed next to the symbol IEC 60417-5172 (2003-02) or the symbol IEC 60417-5180 (2003-02) as appropriate.		N/A
8	Protection against access to live parts		—
8.1.1	Delete the Note.		N/A
10	Power input and current		—
10.1	Replace the penultimate paragraph of the test specification by the following: 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, then the power input is the maximum value that is exceeded for more than 10 % of the representative period. Otherwise the power input is taken as the arithmetic mean value.		N/A
10.2	Replace the penultimate paragraph of the test specification by the following: 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, then the current is the maximum value that is exceeded for more than 10 % of the representative period. Otherwise the current is taken as the arithmetic mean value.		N/A
11	Heating		—
11.8	Delete the second sentence of the first paragraph		P
	Table 3 and its notes modification *External enclosure of **motor-operated appliances** except handles held in normal use:*[m] – *of bare metal* 48 – *of coated metal*[n] 59 – *of glass and ceramic* 65 – *of plastic having a thickness exceeding 0,4 mm*[j] 74 *Surfaces of handles, knobs, grips and similar parts which are continuously held in normal use (e.g. soldering irons):*[m] – *of bare metal* 30 – *of coated metal*[n] 34 – *of porcelain or vitreous material* 40 – *of rubber or of plastic having a thickness exceeding 0,4 mm*[j] 50 – *of wood* 50 *Surfaces of handles, knobs, grips and similar parts*[k] *which are held for short periods only in normal use (e.g. switches):*[m] – *of bare metal* 35 – *of coated metal*[n] 39 – *of porcelain or vitreous material* 45 – *of rubber or of plastic having a thickness exceeding 0,4 mm*[j] 60 – *of wood* 65		P
13	Leakage current and electric strength at operating temperature		—

Clause	Requirement - Test	Result - Remark	Verdict
13.2	In the first paragraph, after “class II appliances” add “, class II constructions” and replace the second sentence by the following: For class 0I appliances and class I appliances, C may be replaced by a low impedance ammeter responding to the rated frequency of the appliance.		P
	Replace the second paragraph by the following: The leakage current is measured between any pole of the supply and – accessible metal parts intended to be connected to protective earth, for class I appliances and class 0I appliances; – metal foil having an area not exceeding 20 cm × 10 cm which is in contact with accessible surfaces of insulating material and metal parts not intended to be connected to protective earth, for class 0 appliances, class II appliances, class II constructions and class III appliances.		P
	Replace the fourth paragraph by the following: For single-phase appliances, the measuring circuit is shown in the following figures: – if they are class II appliances or parts of class II construction, Figure 1; – if they are neither class II appliances nor parts of class II construction, Figure 2.		P
	Replace the sixth paragraph by the following: For three-phase with neutral (3N~) connected appliances, the measuring circuit is shown in the following figures: – if they are class II appliances or parts of class II construction, Figure 3; – if they are neither class II appliances nor parts of class II construction, Figure 4.		N/A
	Delete “For three-phase appliances,” from the first sentence of the seventh paragraph.		N/A
	Replace the third sentence of the seventh paragraph by the following: For three-phase without neutral (3~) connected appliances, the measuring circuit in Figure 3 or Figure 4 shall be used as applicable, but the neutral is not connected to the appliance.		N/A
	In the existing eighth paragraph, replace the first dashed item by the following: – for class II appliances and for parts of class II construction 0,35 mA peak		P
15	Moisture resistance		—
15.2	Replace the first paragraph of the test specification by the following: Compliance is checked by the following test using a spillage solution comprising water containing approximately 1 % NaCl and 0,6 % rinsing agent.		N/A

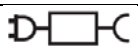
Clause	Requirement - Test	Result - Remark	Verdict
	Replace the fifth paragraph of the test specification by the following: The liquid container of the appliance is completely filled with the solution and a further quantity equal to 15 % of the capacity of the container or 0,25 l, whichever is the greater, is poured in steadily over a period of 1 min.		N/A
	Add the following new text as a penultimate paragraph: Any commercially available rinsing agent may be used, but if there is any doubt with regards to the test results, the rinsing agent shall have the following properties: – viscosity, 17 mPa.s; – pH, 2,2 (1 % in water). and its composition shall be *Substance* / *Parts by mass %* Plurafac ® LF 221[2] — 15,0 Cumene sulfonate (40 % solution) — 11,5 Citric acid (anhydrous) — 3,0 Deionized water — 70,5		N/A
16	Leakage current and electric strength		—
16.2	Replace the first paragraph by the following: An a.c. test voltage is applied between live parts and – accessible metal parts intended to be connected to protective earth, for class I appliances and class 0I appliances; – metal foil having an area not exceeding 20 cm × 10 cm which is in contact with accessible surfaces of insulating material and metal parts not intended to be connected to protective earth, for class 0 appliances, class II appliances, class II constructions and class III appliances.		P
	In the fourth paragraph, replace the first dashed item by the following: – for class II appliances and for parts of class II construction		P
19	ABNORMAL OPERATION		—
19.7	Add the following to the fourth paragraph. If the timer or programmer is an electronic type that operates to ensure compliance with the test before the maximum period under the conditions of Clause 11 is reached, it is considered to be a protective electronic circuit as well as a control that operates under the conditions of Clause 11.		N/A

Clause	Requirement - Test	Result - Remark	Verdict
19.11.4.4	Replace the first paragraph by the following: The power supply terminals of the appliance are subjected to voltage surges in accordance with IEC 61000-4-5, five positive impulses and five negative impulses being applied at the selected points. An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode, a generator having a source impedance of 2 Ω being used. An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling mode, a generator having a source impedance of 12 Ω being used.		N/A
22	Construction		—
22.5	In the requirement, replace “exceeding” by “equal to or greater than”.		N/A
	Add the following text after the existing last paragraph of the test specification. 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 one at a time to the appliance. The discharge test is then repeated three times and for each test, the voltage shall not exceed 34 V.		N/A
22.32	Replace the words ‘Insulating material’ at the beginning of the 4th paragraph of the requirement by ‘Ceramic and similar porous material’ and combine this paragraph with the third paragraph of the requirement.		N/A
22.33	Add the following to the first sentence of the first paragraph of the requirement: “or unearthed metal parts that are separated from live parts by basic insulation only.”		N/A
22.35	In the second paragraph of the requirement add ‘and cordless appliances’ after ‘stationary appliances’.		N/A
	Add the following note after the requirement: NOTE A cordless appliance is an appliance that is connected to the supply only when placed on its associated stand.		N/A
22.53	Class II appliances and class III appliances that incorporate functionally earthed parts shall 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 shall not be accessible without the aid of a tool unless the cover of their compartment can only be opened after at least two independent movements have been applied simultaneously.		N/A
23	Internal wiring		—
23.5	Replace Note 2 by the following text. For class II construction, the requirements for supplementary insulation and reinforced insulation apply except that the sheath of a cord complying with IEC 60227 or IEC 60245 may provide supplementary insulation.		P

Clause	Requirement - Test	Result - Remark	Verdict
	A single layer of internal wiring insulation does not provide reinforced insulation.		P
24	COMPONENTS		—
24.1	Replace Notes 1, 2, 3 and 4 by the following, and renumber Note 5 to Note 2.		—
	Compliance with the IEC standard for the relevant component does not necessarily ensure compliance with the requirements of this standard.		P
	Motors are not required to comply with IEC 60034-1. They are tested as part of the appliance according to this standard.		P
	Relays shall be tested as part of the appliance according to this standard. They may be alternatively tested to IEC 60730-1, in which case they must also meet the additional requirements in IEC 60335-1.		P
	Unless otherwise specified, the requirements of Clause 29 of this standard apply between live parts of components and accessible parts of the appliance. Unless otherwise specified, components may comply with the requirements for clearances and creepage distances for functional insulation as specified in the relevant component standard.		P
	Unless otherwise specified, the requirements of 30.2 of this standard apply to parts of nonmetallic material in components including parts of non-metallic material supporting currentcarrying connections inside components.		P
	Components that have not been previously tested and shown to comply with the IEC standard for the relevant component are tested according to the requirements of 30.2 of this standard.		N/A
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the IEC 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 of this standard, and − unless the pre-selection alternatives in 30.2 are used, the test report for the component states the values of te and ti. as required by IEC 60695-2-11.		P
	If the above two conditions are not satisfied, the component shall be tested as part of the appliance.		P
	NOTE 1 There are two levels of severity specified for appliances for which 30.2.3 is applicable.		N/A
	Power electronic converter circuits are not required to comply with IEC 62477-1. They are tested as part of the appliance according to this standard.		N/A
24.1.2	Add the following text as a new first paragraph. The relevant standard for transformers in associated switch mode power supplies is Annex BB of IEC 61558-2-16. Clause 26 of IEC 61558-1 and Annex H of IEC 61558-1 are not applicable.		N/A

Clause	Requirement - Test	Result - Remark	Verdict
24.1.4	Add the following new paragraph: Thermal cut-outs of the capillary type shall comply with the requirements for type 2.K controls in IEC 60730-2-9.		N/A
24.1.5	In the second sentence of the first paragraph, add “class II” before “appliances”.		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		—
25.1	Replace the first dashed item of the requirement by the following: – supply cord fitted with a plug, the current rating and voltage rating of the plug being not less than the corresponding ratings of its associated appliance;		P
25.7	Delete the third dashed item in the first paragraph of the requirement.		N/A
25.10	Add the following as a new paragraph to the requirement. In multi-phase appliances, the colour of the neutral conductor of the supply cord, if any, shall be blue.		N/A
25.13	In the requirement, replace the second sentence by the following: If it is not evident from the construction of the appliance that the supply cord can be introduced without risk of damage, a non-detachable lining or non-detachable bushing shall be provided that complies with 29.3 for supplementary insulation.		N/A
25.15	Replace the second paragraph of the test specification by the following: A mark is made on the cord at a distance of approximately 20 mm from the cord anchorage or other suitable point. The mark is made while the cord is subjected to a pull force of – 100 N, for fixed appliances regardless of the mass of the appliance; – the value as shown in Table 12, for other appliances.		N/A
25.20	Delete “insulated” and “additionally” from the requirement.		N/A
27	Provision for earthing		—
27.1	In the first paragraph of the requirement replace “an insulation fault” by “a failure of basic insulation”.		P
	Delete Note 1 and replace “Note 2” by “Note”.		P
	Replace the third paragraph by the following: Class 0 appliances, class II appliances and class III appliances shall have no provision for protective earthing. Class II appliances and class III appliances may incorporate an earth for functional purposes.		N/A
27.2	Add the following paragraph to the requirement: These requirements are not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes.		N/A

Clause	Requirement - Test	Result - Remark	Verdict
27.3	Add the following paragraph to the requirement: These requirements are not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes.		N/A
27.4	Add the following paragraph to the requirement: These requirements are not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes.		N/A
27.5	Add the following paragraph to the requirement:		N/A
	These requirements are not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes.		N/A
	Replace existing Note 1 by the following as an addition to the existing second paragraph of the test specification. The test is carried out until steady conditions have been established.		P
	Replace existing Note 2 by the following as an addition to the last paragraph of the test specification. The resistance of the supply cord is not included in the resistance calculation.		N/A
	Renumber existing Note 3 as Note.		N/A
27.6	Add the following sentence to the requirement: This requirement is not applicable to class II appliances and class III appliances that incorporate an earth for functional purposes.		N/A
28	Screws and connections		—
28.2	In the second paragraph of the requirement, replace bullets with dashes in the two bulleted items.		N/A
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		—
29.1	Add the following as a new second paragraph of the requirement: For appliances intended for use at altitudes exceeding 2 000 m, the clearances in Table 16 shall be increased according to the relevant multiplier values in Table A.2 of IEC 60664-1.		N/A
	Add the following to the existing second paragraph of the requirement: or to appliances intended for use at altitudes exceeding 2 000 m.		N/A
	Table 17 – Minimum creepage distances for basic insulation		—
	Replace Note 1 by the following: Lacquered conductors of windings are considered to be bare conductors but creepage distances for basic insulation in other than a double insulation construction need not be greater than the associated clearance specified in Table 16 taking into account 29.1.1.		P

Clause	Requirement - Test	Result - Remark	Verdict
29.3	Replace the third dashed item by the following: – 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 for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		P
	Add the following as the fourth dashed item of the test specification: − 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
ANNEX B	Appliances powered by rechargeable batteries that are recharged in the appliance		—
	Replace the introductory text		—
7	Marking and instructions		—
7.1	Add the following: Appliances intending to be supplied from a detachable supply unit for the purposes of recharging the battery shall be marked with symbol IEC 60417-6181 (2013-03) and its type reference along with symbol ISO 7000-0790 (2004-01) or with the substance of the following: Use only with <model designation> supply unit		N/A
7.6	Add the following:		—
	 [symbol IEC 60417-6181 (2013-03)] detachable supply unit		N/A
7.12	Add the following: 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 shall be stated along with the substance of the following: WARNING: For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance.		N/A
	If the symbol for detachable supply unit is used, its meaning shall be explained.		N/A
7.15	Add the following: The type reference of the detachable supply unit shall be placed in close proximity to the symbol.		N/A
11	Heating		—
11.8	The temperature rise of the battery surface shall not exceed the temperature rise limit in the battery manufacturer's specification for the type of battery supplied. If no limit is specified, the temperature rise shall not exceed 20 K.		N/A
19	Abnormal operation		—

Clause	Requirement - Test	Result - Remark	Verdict
19.13	The battery shall not rupture or ignite.		N/A
ANNEX H	Switches		—
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		—
	Replace the text by the following: Clause 20 is applicable to clearances across full disconnection and micro-disconnection. It is also applicable to creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in Table 24.		N/A
ANNEX S	Battery-operated appliances powered by batteries that are non-rechargeable or not recharged in the appliance		—
5	General conditions for the tests		—
5.8.1	Where the supply terminals for the connection of the battery have no indication of polarity, the more unfavourable polarity shall be applied.		N/A
5.S.101	Battery-operated 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	Battery-operated appliances are tested as motor-operated appliances.		N/A
7	Marking and instructions		—
7.1	Battery-operated appliances shall be marked with the battery voltage and the polarity of the terminals unless the polarity is irrelevant.		N/A
	Battery-operated appliances shall also be marked with the – name, trade mark or identification mark of the manufacturer or responsible vendor; – model or type reference; – IP number according to degree of protection against ingress of water, other than IPX0; – type reference of battery or batteries.		N/A
	If relevant, the positive terminal shall be indicated by the symbol IEC 60417-5005 (2002-10) and the negative terminal by the symbol IEC 60417-5006 (2002-10).		N/A
	If appliances use more than one battery, they shall be marked to indicate correct polarity connection of the batteries.		N/A
	NOTE 1 Examples of acceptable marking representing three batteries are shown in Figure S.1.		N/A
	NOTE 2 It is not necessary for the rated current or rated power input to be marked.		N/A
7.6	+ [symbol IEC 60417-5005 (2002-10)] plus; positive polarity — [symbol IEC 60417-5006 (2002-10)] minus; negative polarity		N/A

Clause	Requirement - Test	Result - Remark	Verdict
7.12	The instructions for battery-operated appliances shall contain the substance of the following, as applicable: – the types of batteries that may be used; – how to remove and insert the batteries; – non-rechargeable batteries are not to be recharged; – rechargeable batteries are to be removed from the appliance before being charged; – different types of batteries or new and used batteries are not to be mixed; – batteries are to be inserted with the correct polarity; – exhausted batteries are to be removed from the appliance and safely disposed of; – if the appliance is to be stored unused for a long period, the batteries should be removed; – the supply terminals are not to be short-circuited.		N/A
11	Heating		—
11.5	By means of an external power supply, battery-operated appliances are supplied at the terminals for the connection of the battery 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; – 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 shall be taken into account.		N/A
19	Abnormal operation		—
19.1	For battery-operated appliances, the tests are carried out with the battery fully charged unless otherwise specified.		N/A
19.13	The battery shall not rupture or ignite.		N/A
19.S.101	Battery-operated 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 such a connection is unlikely to occur due to the construction of the appliance.		N/A
19.S.102	For battery-operated appliances with provision for multiple batteries, one or more of the batteries shall be reversed and the appliance shall be operated, if reversal of batteries is allowed by the construction.		N/A
25	Supply connection and external flexible cords		—
25.5	The flexible leads or flexible cord used to connect an external battery or battery box in battery-operated appliances shall be connected to the appliance by a type X attachment.		N/A

Clause	Requirement - Test	Result - Remark	Verdict
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	Battery-operated appliances shall have suitable means for connection of the battery. If the type of battery is marked on the appliance, the means of connection shall be suitable for this type of battery.		N/A
26	Terminals for external conductors		—
26.5	Terminal devices in an appliance for the connection of the flexible leads or flexible cord connecting an external battery or battery box shall be so located or shielded that there is no risk of accidental connection between supply terminals.		N/A
30	Resistance to heat and fire		—
30.2.3.2	Addition: There shall be no battery in the area of the vertical cylinder used for the consequential needle flame test unless the battery is shielded by a 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 provided that the test sample used for the classification was no thicker than the relevant part of the appliance.		N/A

--- End of Attachment 5 ---

SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch

198 Kezhu Road, Scientech Park, Guangzhou Economic & Technological
Development District, Guangzhou, China 510663
Telephone: +86 (0) 20 82155555
Fax: +86 (0) 20 82075059
Email: ee.guangzhou@sgs.com

VERIFICATION OF EMC COMPLIANCE

Verification No.:	GZEM141200675702V
Applicant No.:	GZEM1604001998HS
Applicant:	United International Co., Ltd.
Address of Applicant:	12F, NO.520, SEC. 4, REN AI RD., TAIPEI, TAIWAN
Manufacturer:	The same as applicant
Address of Manufacturer:	The same as address of applicant
Factory:	Zhongshan Lianchang Co., LTD.
Address of Factory:	No.72 Chang Jiang Road Zhongshan City
Product Description:	DEHUMIDIFIER
Model No.:	PDx-PAyz, x=10, 12, 16, 20; y=E, M1, RB; z=T (when x=16, 20; y=E, M1), BLANK.
Trade Mark:	air master

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

Test Standard:	EN 55014-1:2006+A1:2009+A2:2011, EN 55014-2:2015, EN 61000-3-2:2014, EN 61000-3-3:2013.
As shown in the Test Report Number(s):	GZEM141200675702

This verification of EMC Compliance has been granted to the applicant based on the results of the tests, performed by laboratory of SGS-CSTC Standards Technical Services Co., Ltd. on the sample of the above-mentioned product in accordance with the provisions of the relevant specific standards under Directive 2014/30/EU. The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives.

Kobe Jian
Manager

CE

Date: 2016-05-03

VERIFICATION OF COMPLIANCE

No.:	LVD GZES1604004208HS
Applicant:	United International Co., Ltd. 12 Floor, 520, Section 4, Ren Ai Road, Taipei, Taiwan
Manufacturer:	Zhongshan Lianchang Co., Ltd. 72 Changjiang Road, Zhongshan, Guangdong, China
Factory:	Same as manufacturer
Product Name:	Dehumidifier
Model No.:	PDx-PAyz (x=10, 12, 16, 20; y=E, M1, RB, z=Blank, T (when x=16, 20; y=E, M1))
Rating:	220 V– 240 V; 50 Hz; PD10 series: 250 W; PD12 series: 260 W; PD16 series: 410 W(PD16-PAET, PD16-PAM1T: 850 W (heating function)); PD20 series: 480 W(PD20-PAET, PD20-PAM1T, 950 W(heating function));
Protection against Electric Shock:	Class I
Additional Information (if any):	Refrigerant was R134a. This verification replaces the previous verification no. LVD GZES1411013398HS.
Sufficient samples of the product have been tested and found to be in conformity with	
Test Standard:	EN 60335-2-40: 2003 + A11 + A12 + A1 + A2 + A13 EN 60335-1: 2012 + A11: 2014 EN 62233: 2008
as shown in the Test Report Number(s):	GZES141101339802A1

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

CE

Anson Luo
Laboratory Manager
SGS-CSTC

2016-05-12

EMC EMISSION - TEST REPORT

Report Number	:	**64.711.09.127.16– (E)**	Date of Issue:	2015-07-16

Model / Serial No.	:	See model list in Appendix B
Product Type	:	Dehumidifier
Applicant	:	United International Co., Ltd.
Manufacturer	:	ZHONGSHAN LIANCHANG CO. LTD.
License holder	:	United International Co., Ltd.
Address	:	12 F, NO. 520 SEC. 4, REN AI RD. 110 TAIPEI TAIWAN
Test Result	:	■ **Positive** ☐ **Negative**
Total pages including Appendices	:	**31**

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TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch issued reports.

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5F, Communication Building, 163 Pingyun Rd. Guangzhou 510656 P.R.China, Fax: +86 20 3832 0478 Tel.: +86 20 3832 0668

DIRECTORY - EMISSIONS

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
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EMISSIONS TEST REGULATIONS :

The emissions tests were performed according to the following regulations:

■ - EMC - Directive 2014/30/EU and its amendments

■ - EN 55014-1:2006+A1:2009+A2:2011

■ - Household appliances and similar
☐ - Portable tools
☐ - Semiconductor devices

■ - EN 61000-3-2:2014

■ - EN 61000-3-3:2013

Remark: refer to test report 64.710.09.127.01-07, 64.711.09.127.08-15 for completed information.

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Environmental Conditions In The Laboratory:

	Actual
Temperature:	: 28.0 °C
Relative Humidity:	: 65.0 %
Atmospheric Pressure:	: 101.0 kPa

Power Supply Utilized:

Power supply system	: 264 V / 50 Hz / 1ϕ (for Click, CE & RP test)
	: 230V / 50 Hz / 1ϕ (for other test)

STATEMENT OF MEASUREMENT UNCERTAINTY

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error (please refer to each test item). Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Symbol Definitions:

■ - Applicable
☐ - Not Applicable

Test laboratory:

■ - Inspection and Quarantine Technology Centre of Guangdong Entry-Exit Inspection and Quarantine Bureau
Add: No.3, Desheng East Road, Shunde, Daliang, Foshan, Guangdong, China

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Emissions Test Conditions: CONDUCTED EMISSIONS (Interference Voltage)

The *CONDUCTED EMISSIONS (INTERFERENCE VOLTAGE)* measurements were performed at the following test location:

☐ - Test not applicable

■ - Test Area - Shielded room: Bare shielded room

Test Equipment Used:

	Model Number	Manufacturer	Description	Serial Number	Cal. Due
■ -	SMR4503	SCHAFNER	EMI receiver	47	2015-09-09
■ -	ESH2-Z5	R&S	LISN	3385219.53-100298-HS	2015-09-10
■ -	PLA-10N	Compliance Direction System	10dB Pulse Limiter	110525-010-0030	2015-09-09
☐ -	TK 9420	SCHWARZBECK	Voltage Probe	9420500	2015-09-09
■ -	PM 9010 CLICK 4E	PMM	Click analyser	000WE80803	2016-02-14
■ -	L3-32	PMM	LISN	1220X30403	2016-04-14

Measurement Uncertainty: ±3.80 dB (150KHz-30MHz)

Remarks: All test equipments used are calibrated on a regular basis.

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Emissions Test Conditions: RADIATED EMISSIONS (Electric Field)

The *RADIATED EMISSIONS (ELECTRIC FIELD)* measurements, in the frequency range of 30 MHz-1000 MHz, were tested in a horizontal and vertical polarization at the following test location:

■ - Test not applicable

☐ - Test Area - Anechoic ferrite lined shielded room

Testing was performed at a test distance of:

☐ - 3 meters
☐ - 10 meters

Test Equipment Used:

	Model Number	Manufacturer	Description	Serial Number	Cal. Due
☐ -	ESU 40	Rohde & Schwarz	EMI Test Receiver	100298	2014-10-30
☐ -	CBL6112D	TESEQ	Bi-Log Antenna	25225	2014-11-10
☐ -	PAP-0203-30	Compliance Direction System	Pre-amplifier	22025	2014-02-30

Remarks: All test equipments used are calibrated on a regular basis.

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Emissions Test Conditions: INTERFERENCE POWER

The *INTERFERENCE POWER* measurements were performed by using the absorbing clamp on the mains and interface cables in the frequency range 30 MHz - 300 MHz at the following test location:

☐ - Test not applicable

■ - Test Area - Shielded room: Bare shielded room

Test Equipment Used:

	Model Number	Manufacturer	Description	Serial Number	Cal. Due
■ -	SMR4503	SCHAFNER	EMI receiver	47	2015-09-09
■ -	MDS-21	Rohde & Schwarz	Absorbing Clamp	100443	2015-09-10

Measurement Uncertainty: ±4.40 dB (30-300 MHz)

Remarks: All test equipments used are calibrated on a regular basis.

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Emissions Test Conditions: CONDUCTED EMISSIONS (Harmonics and Flicker)

The *Harmonic Current Emissions and Voltage Fluctuations and Flicker* measurements were performed at the following test location :

☐ - Test not applicable

■ - Test Area - Laboratory open area

Test Equipment Used:

	Model Number	Manufacturer	Description	Serial Number	Cal. Due
■ -	PACS-3	California Instruments	Harmonic & flicker analyzer	72812	2015-09-09
■ -	15003ix	California Instruments	Programmable ac source	59862/59863/59864	2015-09-09
■ -	GDS-3502	GWINSTEK	Oscillograph	EM150382	2016-01-18

Remarks: All test equipments used are calibrated on a regular basis.

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Equipment Under Test (EUT) Test Operation Mode - Emissions Tests:

The equipment under test was operated under the following conditions during emissions testing:

☐ - Standby

☐ - Test Program (H - Pattern)

☐ - Test Program (Color Bar)

☐ - Test Program (Customer Specified)

■ - Normal Operating Mode

☐ - _____

_____

_____

Configuration of the equipment under test:

■ - See Constructional Data Form in Appendix B

■ - See Product Information Form(s) in Appendix B

The following peripheral devices and interface cables were connected during the testing:

☐ - _____ Type : _____

☐ - _____ Type : _____

☐ - _____ Type : _____

☐ - _____ Type : _____

☐ - _____ Type : _____

☐ - _____ Type : _____

☐ - _____ Type : _____

☐ - _____ Type : _____

■ - unshielded power cable

☐ - unshielded cables

☐ - shielded cables TÜV SÜD No.: _____

☐ - customer specific cables

☐ - _____

☐ - _____

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Emissions Test Results:

Conducted Emissions, 9/150/450 kHz - 30 MHz

■ - PASS ☐ - FAIL ☐ - NOT APPLICABLE

Minimum limit margin _____ dB at _____ MHz

Maximum limit exceeding _____ dB at _____ MHz

Remarks: According the pre-test on 160kHz, the voltage 264V was selected for final test. The worst case was considered in operation mode.

Radiated Emissions (Electric Field), 30 MHz - 1000 MHz

☐ - PASS ☐ - FAIL ■ - NOT APPLICABLE

Minimum limit margin _____ dB at _____ MHz

Maximum limit exceeding _____ dB at _____ MHz

Remarks: EUT met additional margin requirement in interference power test, so this test was not applied.

Interference Power at the Mains and Interface Cables, 30 MHz - 300 MHz

■ - PASS ☐ - FAIL ☐ - NOT APPLICABLE

Minimum limit margin _____ dB at _____ MHz

Maximum limit exceeding _____ dB at _____ MHz

Remarks: According to a pre-test at 50MHz, the voltage 264V was selected for final test. The worst case was considered in operation mode.

Harmonic Current Emissions and Voltage Fluctuations and Flicker

■ - PASS ☐ - FAIL ☐ - NOT APPLICABLE

Harmonic measurement exceeding limit _____ Above at _____ Harmonic

Flicker measurement exceeding limit _____ Above the _____ Requirement

Remarks: The worst case was considered in operation mode. The manufacturer declared that the number of cycles per hour was not more than four times.

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China

GENERAL REMARKS:

Add new models PDxx-yyR(xx=10,12,16,19,20; yy=IA, IB) which are the same as original models PDxx-yyR(xx=10,12,16,19,20; yy=SJ) and add alternative compressor FH170M-E for models PD10-yyz series and PD12-yyz series. Therefore model PD12-IAR with compressor FH170M-E is selected to perform full tests and model PD20-IAR is selected to perform CE and DP tests.

SUMMARY:

All tests according to the regulations cited on page 3 were

■ - Performed

☐ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements cited on page 3.

☐ - **Does not** fulfill the general approval requirements cited on page 3.

Testing Start Date: 2015-07-14

Testing End Date: 2015-07-14

- TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch-

Reviewed by: Tony Liu

Prepared by: Steven Zhou

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Appendix A

Test Setup

&

Test Data Sheets

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Photograph of Test Setup:
Conducted Emissions 150kHz-30MHz

☐ **- Test not applicable**

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Photograph of Test Setup:

Interference Power 30MHz-300MHz

☐ **- Test not applicable**

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Photograph of Test Setup:

Harmonic Current/Voltage Fluctuations and Flicker

☐ **- Test not applicable**

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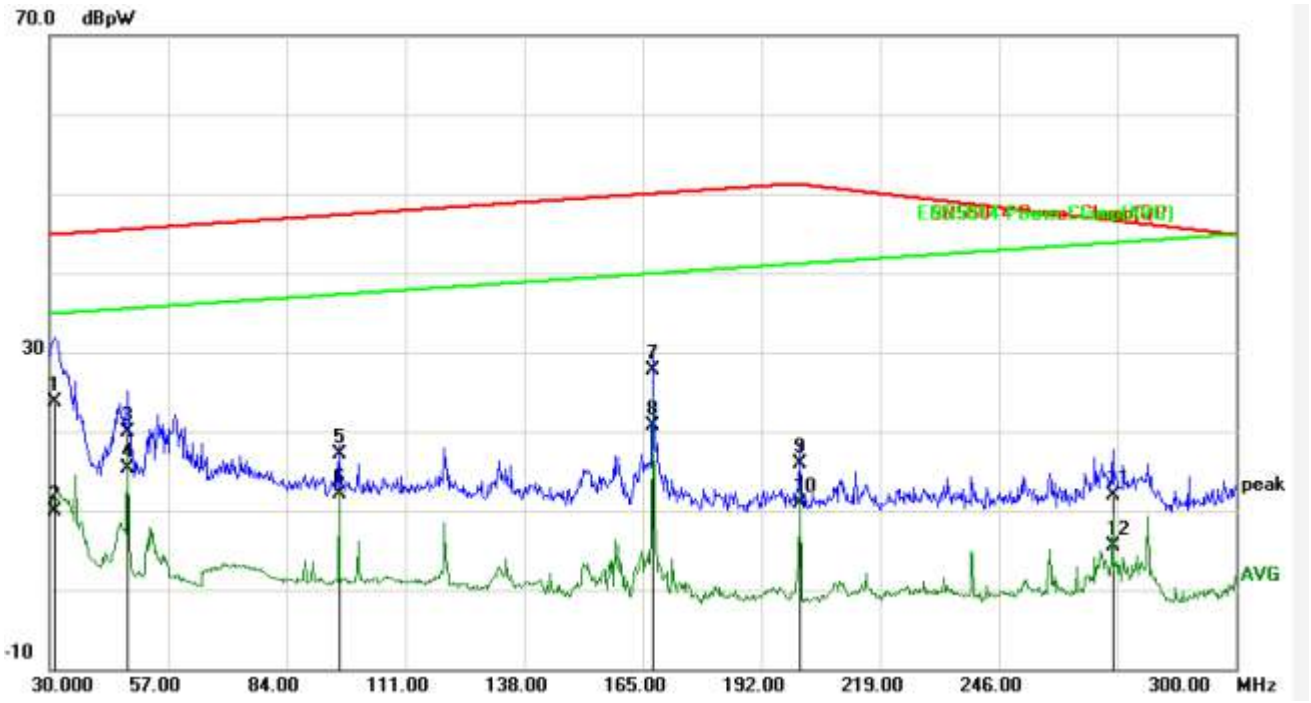
China

INTERFERENCE - POWER-TEST (Peak+AV detection)
Frequency range: 30 - 300 MHz



Measurement result

No.	Frequency (MHz)	Factor (dB)	Reading (dBpW)	Level (dBpW)	Limit (dBpW)	Margin (dB)	Detector	P/F	Remark
1	31.3000	6.93	16.70	23.63	45.05	-21.42	QP	P	
2	31.3000	6.93	3.00	9.93	35.05	-25.12	AVG	P	
3	47.9500	5.26	14.70	19.96	45.67	-25.71	QP	P	
4	47.9500	5.26	10.00	15.26	35.66	-20.40	AVG	P	
5	95.9500	4.72	12.40	17.12	47.44	-30.32	QP	P	
6	95.9500	4.72	7.40	12.12	37.44	-25.32	AVG	P	
7	167.4500	3.15	24.60	27.75	50.09	-22.34	QP	P	
8	167.4500	3.15	17.60	20.75	40.09	-19.34	AVG	P	
9	200.9500	3.74	12.20	15.94	51.24	-35.30	QP	P	
10	200.9500	3.74	7.10	10.84	41.33	-30.49	AVG	P	
11	272.0000	4.26	7.70	11.96	46.76	-34.80	QP	P	
12	272.0000	4.26	1.20	5.46	43.96	-38.50	AVG	P	

Model : PD12-IAR

Operation Mode : Dehumidifying AC Line

	Date	Name
Tested by	2015-07-14	Steven Zhou

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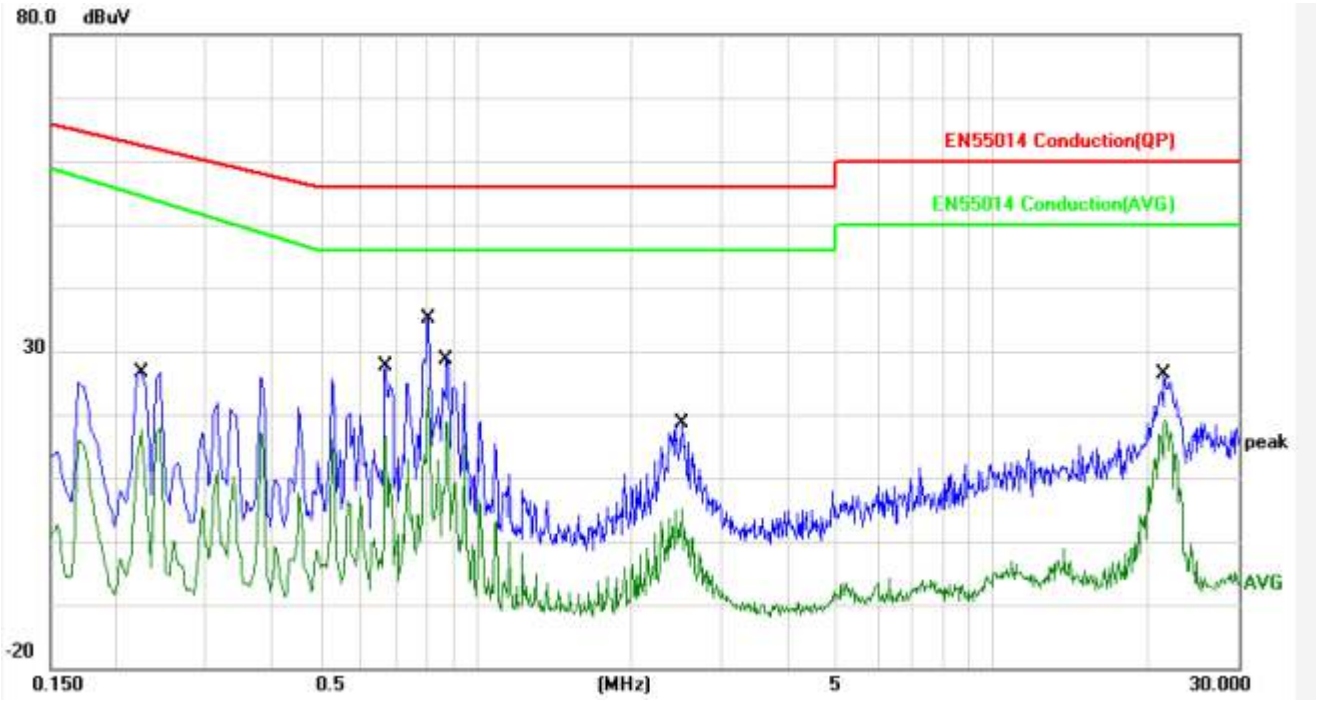
Conducted Emission (Peak+AV detection)



Measurement result

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2250	9.85	16.85	26.70	62.63	-35.93	QP	P	
2	0.2250	9.85	2.35	12.20	54.62	-42.42	AVG	P	
3	0.6700	10.08	13.52	23.60	56.00	-32.40	QP	P	
4	0.6700	10.08	4.32	14.40	46.00	-31.60	AVG	P	
5	0.8100	10.12	18.48	28.60	56.00	-27.40	QP	P	
6	0.8100	10.12	5.78	15.90	46.00	-30.10	AVG	P	
7	0.8800	10.13	11.57	21.70	56.00	-34.30	QP	P	
8	0.8800	10.13	0.27	10.40	46.00	-35.60	AVG	P	
9	2.5100	10.19	4.11	14.30	56.00	-41.70	QP	P	
10	2.5100	10.19	-6.79	3.40	46.00	-42.60	AVG	P	
11	21.5950	10.36	8.14	18.50	60.00	-41.50	QP	P	
12	21.5950	10.36	0.04	10.40	50.00	-39.60	AVG	P	

Model : PD12-IAR
Operation Mode : Dehumidifying L

	Date	Name
Tested by	2015-07-14	Steven Zhou

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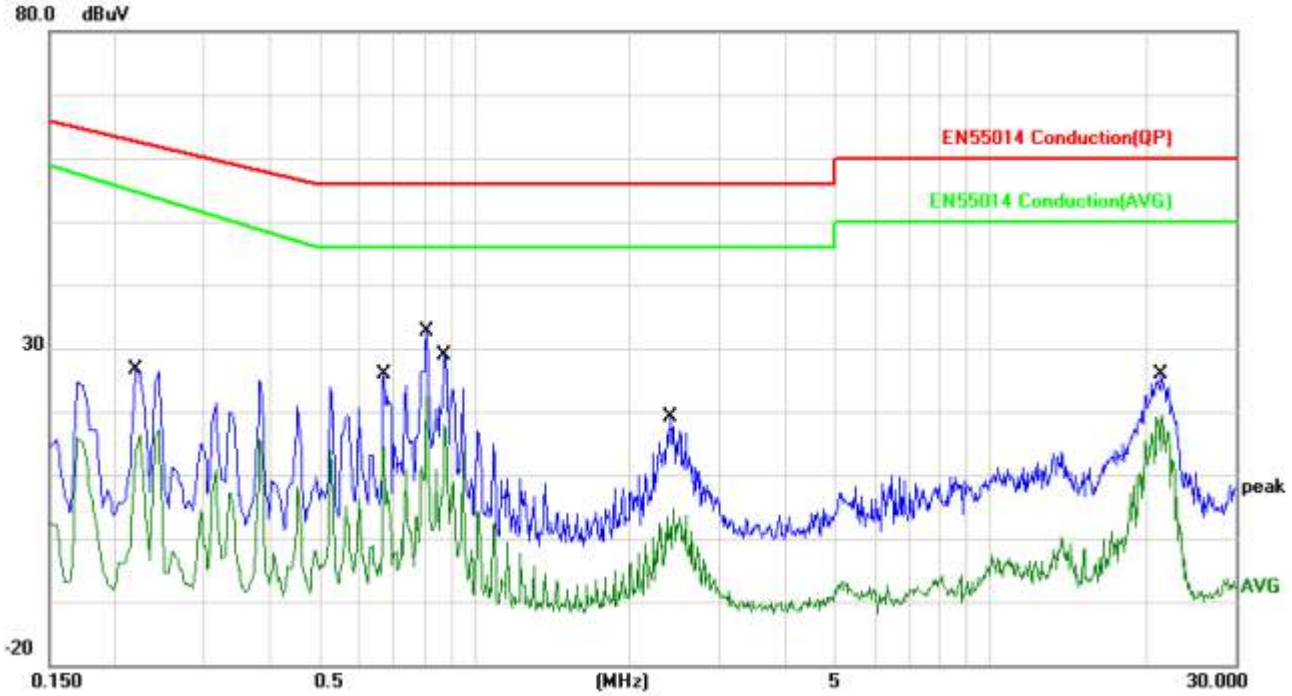
Conducted Emission (Peak+AV detection)



Measurement result

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2200	9.84	2.96	12.80	62.82	-50.02	QP	P	
2	0.2200	9.84	-9.64	0.20	54.86	-54.66	AVG	P	
3	0.6700	10.08	17.02	27.10	56.00	-28.90	QP	P	
4	0.6700	10.08	7.22	17.30	46.00	-28.70	AVG	P	
5	0.8100	10.12	19.48	29.60	56.00	-26.40	QP	P	
6	0.8100	10.12	6.18	16.30	46.00	-29.70	AVG	P	
7	0.8800	10.13	12.97	23.10	56.00	-32.90	QP	P	
8	0.8800	10.13	0.87	11.00	46.00	-35.00	AVG	P	
9	2.4050	10.19	6.01	16.20	56.00	-39.80	QP	P	
10	2.4050	10.19	-5.69	4.50	46.00	-41.50	AVG	P	
11	21.5950	10.36	7.34	17.70	60.00	-42.30	QP	P	
12	21.5950	10.36	-0.56	9.80	50.00	-40.20	AVG	P	

Model : PD12-IAR
Operation Mode : Dehumidifying N

	Date	Name
Tested by	2015-07-14	Steven Zhou

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Discontinuous Disturbance (Click)

Run A Observation time T1= 120 min 0 sec

Frequency	150kHz	500kHz	1.4MHz	30MHz
Limit value (L)(dBuV)	66	56	56	60
Short clicks	2	0	0	0
Long clicks	0	0	0	0
Total (short + long) n	2	0	0	0
Click rate	0.01	0.00		
Continuous Interference (max)	0.00 sec	0.00 sec	0.00 sec	0.00 sec

Switching operations: s= 0
Click rate formula: N = s/T
Click rate used in calculating Run B limit: N1 = N2 = (used for 0.5 MHz to 30 MHz)

Run B Observation time T2=

Limit value (L)(dBuV)	-	-	-	-
Short clicks	-	-	-	-
Long clicks	-	-	-	-
Total (short + long) n	-	-	-	-
% > Lq (max 25%)	-	-	-	-

Remarks:

Apparatus Passes (subject to exceptions)
Click rate not > 5 and no long clicks.

Conformity: YES

Model : PD12-IAR
Operation Mode : Dehumidifying

	Date	Name
Tested by	2015-07-14	Steven Zhou

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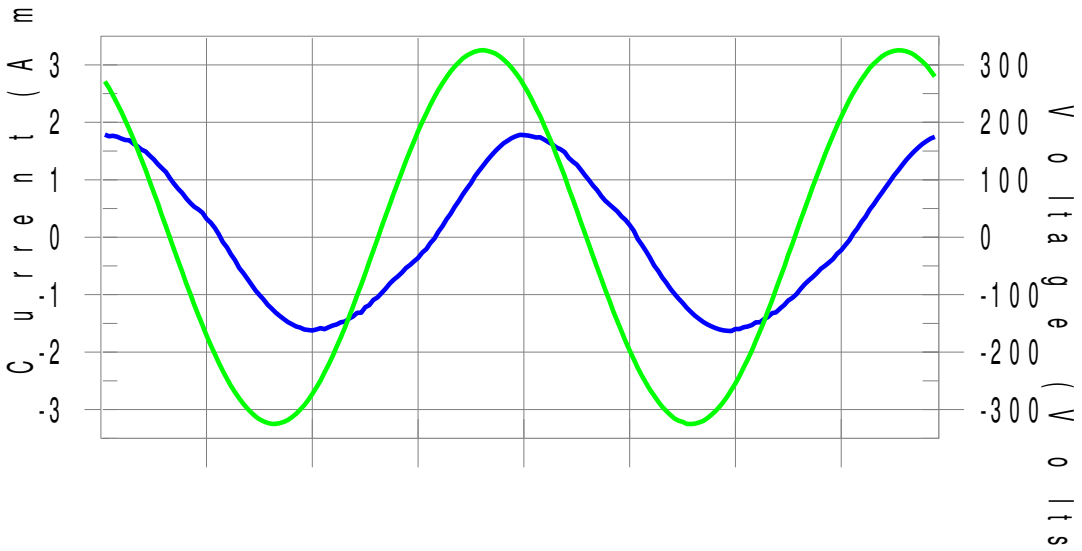
Harmonics – Class-A per Ed. 4.0 (2014) incl. inter-harmonics

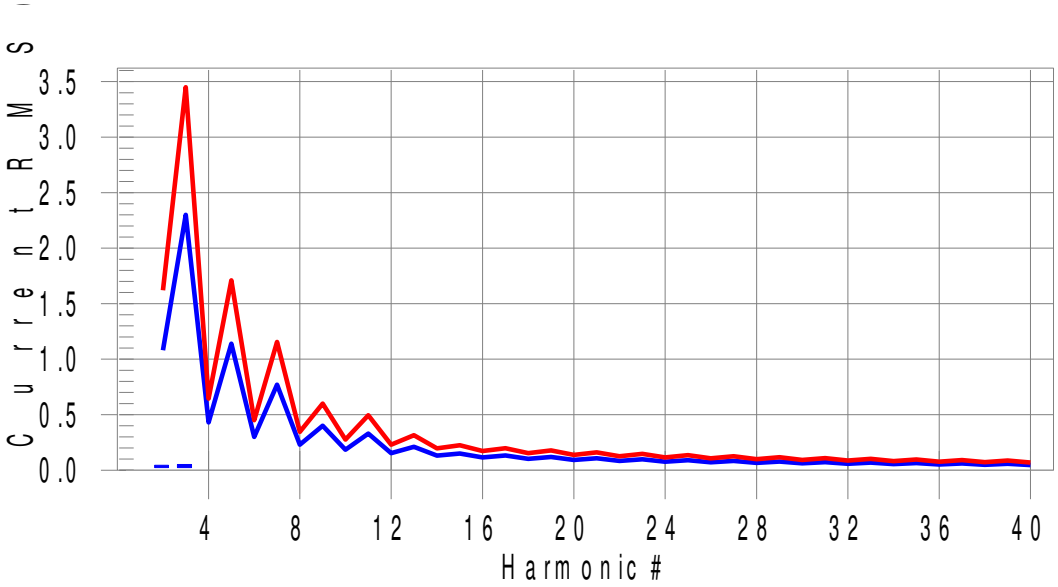
EUT: PD12-IAR **Tested by: STEVEN ZHOU**
Test category: Class-A per Ed. 4.0 (2014) (European limits) **Test Margin: 100**
Test date: 2015-7-14 **Start time: 9:40:52** **End time: 9:43:43**
Test duration (min): 2.5
Comment: Dehumidifying

Test Result: Pass **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class A limit line **European Limits**



Test result: Pass Worst harmonic was #2 with 4.1% of the limit.

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Current Test Result Summary

EUT: PD12-IAR **Tested by: STEVEN ZHOU**
Test category: Class-A per Ed. 4.0 (2014) (European limits) **Test Margin: 100**
Test date: 2015-7-14 **Start time: 9:40:52** **End time: 9:43:43**
Test duration (min): 2.5
Comment: Dehumidifying

Test Result: Pass **Source qualification: Normal**
THC(A): 0.072 **I-THD(%): 6.3** **POHC(A): 0.000** **POHC Limit(A): 0.251**
Highest parameter values during test:

V_RMS (Volts):	**230.22**	**Frequency(Hz):**	**50.00**
I_Peak (Amps):	**1.793**	**I_RMS (Amps):**	**1.172**
I_Fund (Amps):	**1.169**	**Crest Factor:**	**1.538**
Power (Watts):	**198.5**	**Power Factor:**	**0.740**

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.044	1.080	4.1	0.051	1.620	3.1	Pass
3	0.052	2.300	2.3	0.059	3.450	1.7	Pass
4	0.009	0.430	2.2	0.011	0.645	1.7	Pass
5	0.015	1.140	1.3	0.016	1.710	1.0	Pass
6	0.005	0.300	N/A	0.006	0.450	N/A	Pass
7	0.014	0.770	1.8	0.015	1.155	1.3	Pass
8	0.003	0.230	N/A	0.004	0.345	N/A	Pass
9	0.004	0.400	N/A	0.005	0.600	N/A	Pass
10	0.002	0.184	N/A	0.003	0.276	N/A	Pass
11	0.003	0.330	N/A	0.003	0.495	N/A	Pass
12	0.001	0.153	N/A	0.002	0.230	N/A	Pass
13	0.001	0.210	N/A	0.002	0.315	N/A	Pass
14	0.001	0.131	N/A	0.001	0.197	N/A	Pass
15	0.001	0.150	N/A	0.001	0.225	N/A	Pass
16	0.001	0.115	N/A	0.001	0.173	N/A	Pass
17	0.001	0.132	N/A	0.002	0.198	N/A	Pass
18	0.001	0.102	N/A	0.001	0.153	N/A	Pass
19	0.001	0.118	N/A	0.001	0.178	N/A	Pass
20	0.001	0.092	N/A	0.001	0.138	N/A	Pass
21	0.001	0.107	N/A	0.002	0.161	N/A	Pass
22	0.001	0.084	N/A	0.001	0.125	N/A	Pass
23	0.001	0.098	N/A	0.002	0.147	N/A	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.001	0.090	N/A	0.002	0.135	N/A	Pass
26	0.001	0.071	N/A	0.001	0.107	N/A	Pass
27	0.001	0.083	N/A	0.002	0.125	N/A	Pass
28	0.001	0.066	N/A	0.001	0.099	N/A	Pass
29	0.001	0.078	N/A	0.002	0.116	N/A	Pass
30	0.001	0.061	N/A	0.001	0.092	N/A	Pass
31	0.001	0.073	N/A	0.002	0.109	N/A	Pass
32	0.001	0.058	N/A	0.001	0.086	N/A	Pass
33	0.001	0.068	N/A	0.001	0.102	N/A	Pass
34	0.001	0.054	N/A	0.001	0.081	N/A	Pass
35	0.001	0.064	N/A	0.001	0.096	N/A	Pass
36	0.000	0.051	N/A	0.001	0.077	N/A	Pass
37	0.001	0.061	N/A	0.001	0.091	N/A	Pass
38	0.000	0.048	N/A	0.001	0.073	N/A	Pass
39	0.001	0.058	N/A	0.001	0.087	N/A	Pass
40	0.000	0.046	N/A	0.001	0.069	N/A	Pass

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Flicker Test Summary per EN/IEC61000-3-3

EUT: PD12-IAR **Tested by: STEVEN ZHOU**
Test category: 24 x dmax Test **Test Margin: 100**
Test date: 2015-7-14 **Start time: 10:17:56** **End time: 12:05:30**
Test duration (min): 120
Comment: Dehumidifying

Test Result: Pass **Status: Test Completed**

Parameter values recorded during the test: **European Limits**

Vrms at the end of test (Volt):	**230.10**			
Highest dt (%):	**1.04**	**Test limit (%):**	**N/A**	**N/A**
T-max (mS):	**0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.25**	**Test limit (%):**	**3.30**	**Pass**

Parameter values recorded during the test: **European Limits**

Vrms at the end of test (Volt):	**229.90**		
Average dmax (%):	**1.22**	**Test limit (%):**	**6.00**

Test Number	**Dmax**	
1	**1.359**	
2	**1.508**	
3	**1.577**	**Highest dmax (Disregarded)**
4	**0.810**	
5	**1.454**	
6	**0.788**	
7	**1.440**	
8	**1.464**	
9	**0.775**	
10	**1.462**	
11	**0.751**	
12	**1.457**	
13	**0.741**	**Lowest dmax (Disregarded)**
14	**1.456**	
15	**1.245**	
16	**1.547**	
17	**0.877**	
18	**1.295**	
19	**1.364**	
20	**0.928**	
21	**1.571**	
22	**1.227**	
23	**1.154**	
24	**0.958**	
Average of 22 Dmax	**1.222**	
Lowest Dmax	**0.741**	
Highest Dmax	**1.577**	

According to clause A.14 of Annex A of EN 61000-3-3 standard, Pst and Plt evaluated by analytical method
Pst=0.206 **Test limit: 1.000;**
Plt= 0.180 **Test limit: 0.650**

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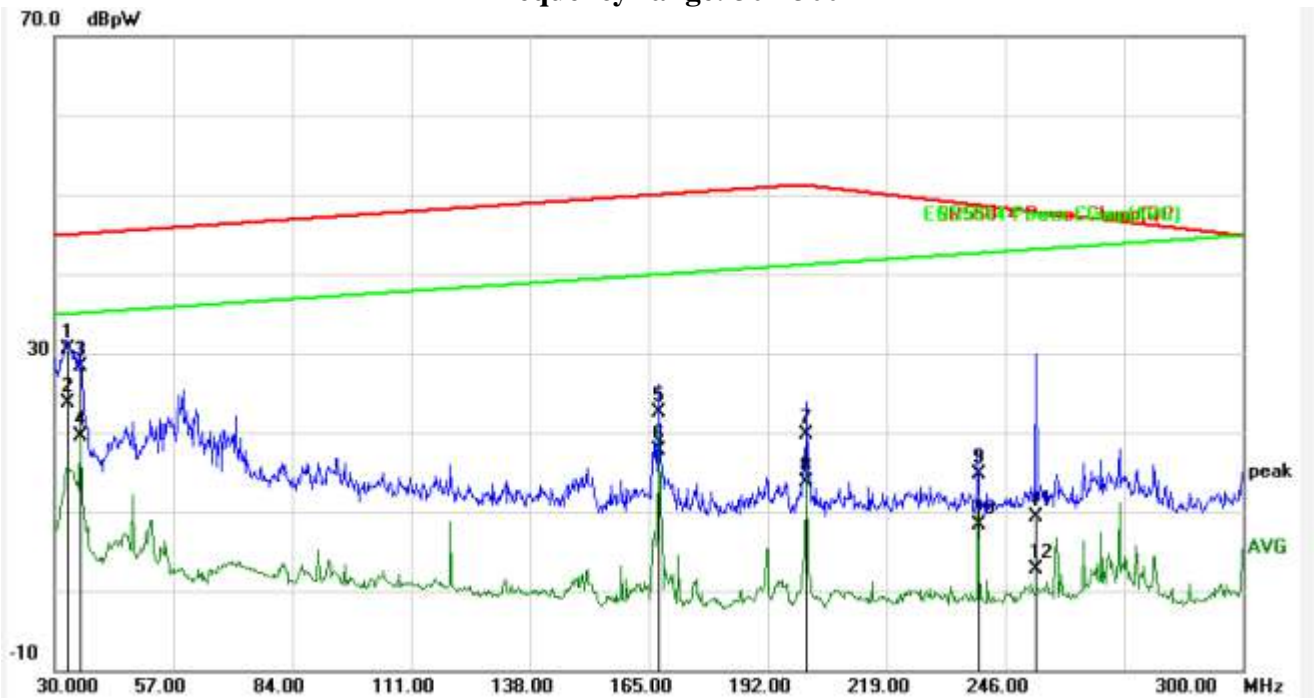
China

INTERFERENCE - POWER-TEST (Peak+AV detection)
Frequency range: 30 - 300 MHz



Measurement result

No.	Frequency (MHz)	Factor (dB)	Reading (dBpW)	Level (dBpW)	Limit (dBpW)	Margin (dB)	Detector	P/F	Remark
1	32.9000	7.09	23.50	30.59	45.11	-14.52	QP	P	
2	32.9000	7.09	16.60	23.69	35.11	-11.42	AVG	P	
3	36.0500	7.24	21.10	28.34	45.22	-16.88	QP	P	
4	36.0500	7.24	12.30	19.54	35.22	-15.68	AVG	P	
5	167.4500	3.15	19.30	22.45	50.09	-27.64	QP	P	
6	167.4500	3.15	14.60	17.75	40.09	-22.34	AVG	P	
7	200.9500	3.74	16.00	19.74	51.24	-31.50	QP	P	
8	200.9500	3.74	10.00	13.74	41.33	-27.59	AVG	P	
9	239.9500	3.70	11.10	14.80	48.78	-33.98	QP	P	
10	239.9500	3.70	4.70	8.40	42.78	-34.38	AVG	P	
11	253.1500	3.93	5.40	9.33	47.95	-38.62	QP	P	
12	253.1500	3.93	-1.30	2.63	43.26	-40.63	AVG	P	

Model : PD20-IAR

Operation Mode : Dehumidifying AC Line

	Date	Name
Tested by	2015-07-14	Steven Zhou

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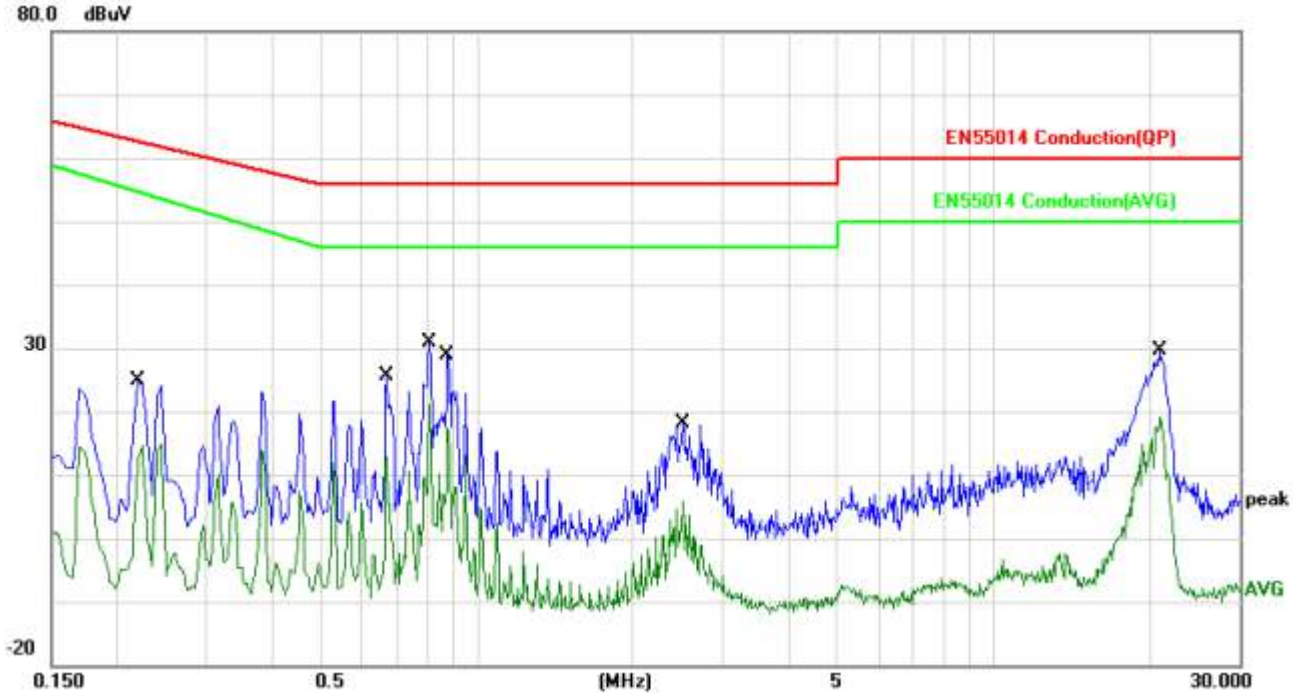
Conducted Emission (Peak+AV detection)



Measurement result

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2200	9.84	-0.24	9.60	62.82	-53.22	QP	P	
2	0.2200	9.84	-12.34	-2.50	54.86	-57.36	AVG	P	
3	0.6700	10.08	10.92	21.00	56.00	-35.00	QP	P	
4	0.6700	10.08	1.82	11.90	46.00	-34.10	AVG	P	
5	0.8100	10.12	13.58	23.70	56.00	-32.30	QP	P	
6	0.8100	10.12	0.58	10.70	46.00	-35.30	AVG	P	
7	0.8800	10.13	8.87	19.00	56.00	-37.00	QP	P	
8	0.8800	10.13	-3.33	6.80	46.00	-39.20	AVG	P	
9	2.5100	10.19	3.21	13.40	56.00	-42.60	QP	P	
10	2.5100	10.19	-8.09	2.10	46.00	-43.90	AVG	P	
11	21.0350	10.35	15.55	25.90	60.00	-34.10	QP	P	
12	21.0350	10.35	8.65	19.00	50.00	-31.00	AVG	P	

Model : PD20-IAR
Operation Mode : Dehumidifying L

	Date	Name
Tested by	2015-07-14	Steven Zhou

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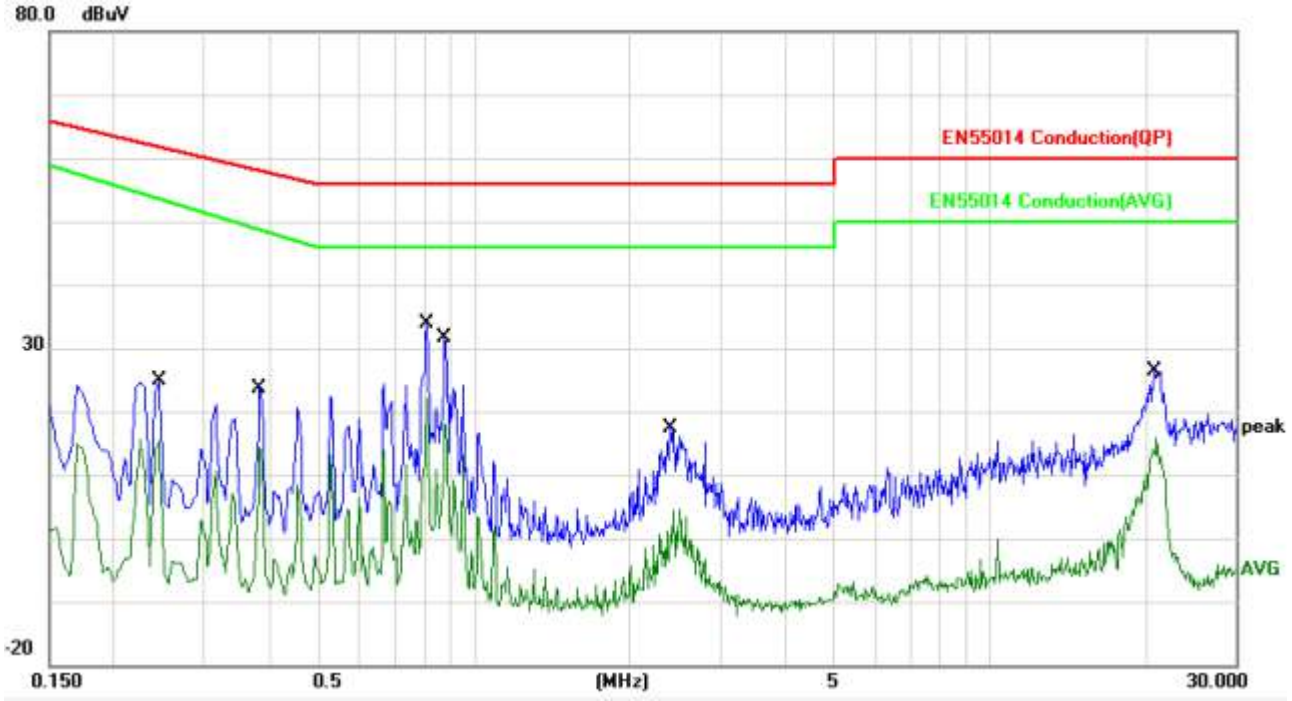
Conducted Emission (Peak+AV detection)



Measurement result

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2450	9.86	11.64	21.50	61.92	-40.42	QP	P	
2	0.2450	9.86	3.74	13.60	53.70	-40.10	AVG	P	
3	0.3850	9.95	2.85	12.80	58.17	-45.37	QP	P	
4	0.3850	9.95	-5.95	4.00	48.82	-44.82	AVG	P	
5	0.8100	10.12	16.98	27.10	56.00	-28.90	QP	P	
6	0.8100	10.12	2.88	13.00	46.00	-33.00	AVG	P	
7	0.8800	10.13	10.17	20.30	56.00	-35.70	QP	P	
8	0.8800	10.13	-0.93	9.20	46.00	-36.80	AVG	P	
9	2.4050	10.19	1.71	11.90	56.00	-44.10	QP	P	
10	2.4050	10.19	-10.29	-0.10	46.00	-46.10	AVG	P	
11	20.8950	10.35	11.65	22.00	60.00	-38.00	QP	P	
12	20.8950	10.35	4.75	15.10	50.00	-34.90	AVG	P	

Model : PD12-IAR
Operation Mode : Dehumidifying N

	Date	Name
Tested by	2015-07-14	Steven Zhou

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Appendix B

Constructional Data Form

and

Product Information Form(s)

Any safety relevant information or constructional aspect concerning the sample or equipment under test as submitted by the applicant / report holder / certificate holder or any authorized agent is deemed to have no adverse effect on the electromagnetic compatibility (EMC) performance. Insofar as safety or compliance with Low Voltage Directive (LVD) or any relevant directive is concerned, the applicant / report holder / certificate holder or any authorized agent is required, by virtue of the relevant EU Directive provisions, to have satisfied that the product concerned (for which a sample was tested) meets with LVD or other relevant directives before placing it on the market.

Where applicable, changes or modifications made to the original sample submitted for testing are documented herein. The applicant or manufacturer shall ensure that such changes or modifications are applied to the production units. Any further changes or modifications made to the production units may void the validity of this test report unless such changes or modifications have been formally assessed by TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch through technical evaluations or other means as appropriate and it has been confirmed that the EMC performance of such units is not adversely affected.

The enclosed, if any, circuit diagram / parts list / printed circuit board diagram / component layout / user manual are strictly for reference only. TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch shall not be held responsible for any error or omission in such documents. It is the manufacturer's responsibility to ensure that production units conform to the tested sample.

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Model details

Input power:250W	Input power:260W	Input power:410W
PD10-711RB	PD12-711RB	PD16-711RB
PD10-712RB	PD12-712RB	PD16-712RB
PD10-721RB	PD12-721RB	PD16-721RB
PD10-722RB	PD12-722RB	PD16-722RB
PD10-731RB	PD12-731RB	PD16-731RB
PD10-732RB	PD12-732RB	PD16-732RB
PD10-811RB	PD12-811RB	PD16-811RB
PD10-812RB	PD12-812RB	PD16-812RB
PD10-821RB	PD12-821RB	PD16-821RB
PD10-822RB	PD12-822RB	PD16-822RB
PD10-831RB	PD12-831RB	PD16-831RB
PD10-832RB	PD12-832RB	PD16-832RB
PD10-911RB	PD12-911RB	PD16-911RB
PD10-912RB	PD12-912RB	PD16-912RB
PD10-921RB	PD12-921RB	PD16-921RB
PD10-922RB	PD12-922RB	PD16-922RB
PD10-931RB	PD12-931RB	PD16-931RB
PD10-932RB	PD12-932RB	PD16-932RB
PD10-A11RB	PD12-A11RB	PD16-A11RB
PD10-A12RB	PD12-A12RB	PD16-A12RB
PD10-A21RB	PD12-A21RB	PD16-A21RB
PD10-A22RB	PD12-A22RB	PD16-A22RB
PD10-A31RB	PD12-A31RB	PD16-A31RB
PD10-A32RB	PD12-A32RB	PD16-A32RB
PD10-711MB	PD12-711MB	PD16-711MB
PD10-712MB	PD12-712MB	PD16-712MB
PD10-721MB	PD12-721MB	PD16-721MB
PD10-722MB	PD12-722MB	PD16-722MB
PD10-731MB	PD12-731MB	PD16-731MB
PD10-732MB	PD12-732MB	PD16-732MB
PD10-811MB	PD12-811MB	PD16-811MB
PD10-812MB	PD12-812MB	PD16-812MB
PD10-821MB	PD12-821MB	PD16-821MB
PD10-822MB	PD12-822MB	PD16-822MB
PD10-831MB	PD12-831MB	PD16-831MB
PD10-832MB	PD12-832MB	PD16-832MB
PD10-911MB	PD12-911MB	PD16-911MB
PD10-912MB	PD12-912MB	PD16-912MB
PD10-921MB	PD12-921MB	PD16-921MB
PD10-922MB	PD12-922MB	PD16-922MB
PD10-931MB	PD12-931MB	PD16-931MB
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PD10-A11MB	PD12-A11MB	PD16-A11MB
PD10-A12MB	PD12-A12MB	PD16-A12MB
PD10-A21MB	PD12-A21MB	PD16-A21MB
PD10-A22MB	PD12-A22MB	PD16-A22MB
PD10-A31MB	PD12-A31MB	PD16-A31MB

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PD10-A32MB	PD12-A32MB	PD16-A32MB
	KPD 10U	
	KPD 12U	
	S12U	
	S10U	

Input power	**Model**					
250W	PD10-SBE	PD10-SYE	PD10-SYR	PD10-SAE	PD10-SAR	PD10-SAM
260W	PD12-SBE	PD12-SYE	PD12-SYR	PD12-SAE	PD12-SAR	PD12-SAM
410W	PD16-SBE	PD16-SYE	PD16-SYR	PD16-SAE	PD16-SAR	PD16-SAM
410W	PD19-SBE	PD19-SYE	PD19-SYR	PD19-SAE	PD19-SAR	PD19-SAM
480W	PD20-SBE	PD20-SYE	PD20-SYR	PD20-SAE	PD20-SAR	PD20-SAM
500W	PD25-SBE	PD25-SYE	PD25-SYR	/	/	/

Input power	**Model**				
250W	PD10-SDE	PD10-SDR	PD10-SAN	PD10-SDN	PD10-SDM
260W	PD12-SDE	PD12-SDR	PD12-SAN	PD12-SDN	PD12-SDM
410W	PD16-SDE	PD16-SDR	PD16-SAN	PD16-SDN	PD16-SDM
410W	PD19-SDE	PD19-SDR	PD19-SAN	PD19-SDN	PD19-SDM
480W	PD20-SDE	PD20-SDR	PD20-SAN	PD20-SDN	PD20-SDM

Input power	**Model**			
250W	PD10-SER	PD10-SEE	PD10-SFE	PD10-SFR
260W	PD12-SER	PD12-SEE	PD12-SFE	PD12-SFR
410W	PD16-SER	PD16-SEE	PD16-SFE	PD16-SFR
410W	PD19-SER	PD19-SEE	PD19-SFE	PD19-SFR
480W	PD20-SER	PD20-SEE	PD20-SFE	PD20-SFR

Input power	**Model**			
250W	PD10-SCR	PD10-SCE	PD10-SGR	PD10-SGE
260W	PD12-SCR	PD12-SCE	PD12-SGR	PD12-SGE
410W	PD16-SCR	PD16-SCE	PD16-SGR	PD16-SGE
410W	PD19-SCR	PD19-SCE	PD19-SGR	PD19-SGE
480W	PD20-SCR	PD20-SCE	PD20-SGR	PD20-SGE
250W	PD10-SHR	PD10-SHE		
260W	PD12-SHR	PD12-SHE		
410W	PD16-SHR	PD16-SHE		
410W	PD19-SHR	PD19-SHE		
480W	PD20-SHR	PD20-SHE		

Input power	**Model**			
250W	PD10-CAR	PD10-CAE	PD10-BAR	
260W	PD12- CAR	PD12- CAE	PD12-BAR	
410W	PD16- CAR	PD16- CAE	PD16-BAR	
480W	PD20- CAR	PD20- CAE	PD20-BAR	

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Input power	Model		
250W	PD10-DAR	PD10-DAE	PD10-DBE
260W	PD12-DAR	PD12-DAE	PD12-DBE
410W	PD16-DAR	PD16-DAE	PD16-DBE
410W	PD19-DAR	PD19-DAE	PD19-DBE
480W	PD20-DAR	PD20-DAE	PD20-DBE
Input power	**Model**		
250W	PD10-SJR	PD10-SJE	
260W	PD12-SJR	PD12-SJE	
410W	PD16-SJR	PD16-SJE	
410W	PD19-SJR	PD19-SJE	
480W	PD20-SJR	PD20-SJE	
Input power	**Model**		
250W	PD10-IAR	PD10-IBR	
260W	PD12-IAR	PD12-IBR	
410W	PD16-IAR	PD16-IBR	
410W	PD19- IAR	PD19-IBR	
480W	PD20- IAR	PD20-IBR	

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Appendix C

Constructional Photographs
of
Equipment under test (EUT)

Any safety relevant information or constructional aspect concerning the sample or equipment under test as submitted by the applicant / report holder / certificate holder or any authorized agent is deemed to have no adverse effect on the electromagnetic compatibility (EMC) performance. Insofar as safety or compliance with Low Voltage Directive (LVD) or any relevant directive is concerned, the applicant / report holder / certificate holder or any authorized agent is required, by virtue of the relevant EU Directive provisions, to have satisfied that the product concerned (for which a sample was tested) meets with LVD or other relevant directives before placing it on the market.

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Constructional Photographs

Alternative compressor FH170M-E for models PD10-yyz series and PD12-yyz series

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China

EMC IMMUNITY - TEST REPORT

Report Number	:	**64.711.09.127.16– (I)**	Date of Issue:	2015-07-08

Model / Serial No.	:	See model list in Appendix B
Product Type	:	Dehumidifier
Applicant	:	United International Co., Ltd.
Manufacturer	:	ZHONGSHAN LIANCHANG CO. LTD.
License holder	:	United International Co., Ltd.
Address	:	12 F, NO. 520, SEC. 4, REN AI RD., 110 TAIPEI, TAIWAN
Test Result	:	■ **Positive** ☐ **Negative**
Total pages including Appendices	:	**4**

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TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch issued reports.

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D I R E C T O R Y - I M M U N I T Y

Remark:
Constructional Data Form and Product Information Form(s) and Constructional Photographs of EUT refer to emission test report

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IMMUNITY TEST REGULATIONS:

The immunity tests were performed according to the following regulations:

■ - EMC - Directive 2014/30/EU and its amendments

■ - EN 55014-2:1997+A1:2001+A2:2008

Following basic standards were used as reference:

☐ - IEC 61000-4-2:1995+A1:1998+A2:2000
☐ - IEC 61000-4-3:2006+A1:2007
☐ - IEC 61000-4-4:2004
☐ - IEC 61000-4-5:2005
☐ - IEC 61000-4-6:2003+A1:2004+A2:2006
☐ - IEC 61000-4-8:1993+A1:2000
☐ - IEC 61000-4-11:2004

Remark: refer to test report 64.710.09.127.01-07, 64.711.09.127.08-15 for completed information.

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China

GENERAL REMARKS:

Add new models PDxx-yyR(xx=10,12,16,19,20; yy=IA, IB) which are the same as original models PDxx-yyR(xx=10,12,16,19,20; yy=SJ) and add alternative compressor FH170M-E for models PD10-yyz series and PD12-yyz series. Therefore no tests are applied to perform.

SUMMARY:

All tests according to the regulations cited on page 3 were

■ - Performed

☐ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements cited on page 3.

☐ - **Does not** fulfill the general approval requirements cited on page 3.

Testing Start Date: Not Applicable

Testing End Date: Not Applicable

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Reviewed by: Tony Liu

Prepared by: Steven Zhou

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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.....:	64.111.08.1321.17 Rev.00
Date of issue .....:	2016-10-18
Total number of pages.....:	112
Applicant's name .....:	United International Co., Ltd.
Address .....:	12F, NO.520, SEC. 4, REN AI RD. 110, TAIPEI, Taiwan.
Test specification:	
Standard.....:	IEC 60335-2-40:2002 (Fourth Edition) + A1:2005 (incl. Corr.1:2006) + A2:2005 in conjunction with IEC 60335-1:2010 (Fifth Edition)
Test procedure.....:	GS mark and CE-LVD
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60335_2_40J
Test Report Form(s) Originator ....:	VDE
Master TRF .....:	Dated 2014-06

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

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Test item description .....:	Dehumidifier
Trade Mark .....:	**air master**
Manufacturer.....:	Manufacturer Name: United International Co., Ltd. Address: 12F, NO.520, SEC. 4, REN AI RD. 110, TAIPEI, Taiwan.
Model/Type reference .....:	PD10 series, PD12 series, PD16 series, PD19 series, PD20 series, PD25 series (See model list on pages 12-13)
Ratings .....:	220-240V~, 50Hz, Class I, R134a, for other ratings please refer to the rating information on page 12-13.

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch	
Testing location/ address .....:		5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West, Guangzhou 510656, P. R. China	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address .....:			
Tested by (name + signature).....:		Owen Zhou	
Approved by (name + signature).....:		Jeffrey Zhou	
☐	**Testing procedure: TMP/CTF Stage 1:**	--	
Testing location/ address .....:			
Tested by (name + signature).....:			
Approved by (name + signature).....:			
☐	**Testing procedure: WMT/CTF Stage 2:**	--	
Testing location/ address .....:			
Tested by (name + signature).....:			
Witnessed by (name + signature).....:			
Approved by (name + signature).....:			
☐	**Testing procedure: SMT/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):

Attachment No.1: 2 pages of ATTACHMENT TO TEST REPORT EN 60335 1:2012 Household and similar electrical appliances - Safety - Part 1: General requirements A11:2014

Attachment No.2: 18 pages of report DIFFERENCES for EN 60335-2-40:2003 (incl. Corr.:2006) +

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A11:2004 + A12:2005 + A1:2006 + A2:2009 + A13:2012 + A11:2014 and EN 60335 1:2012.

Attachment No.3: 2 pages of PAHs evaluation report.

Summary of testing:

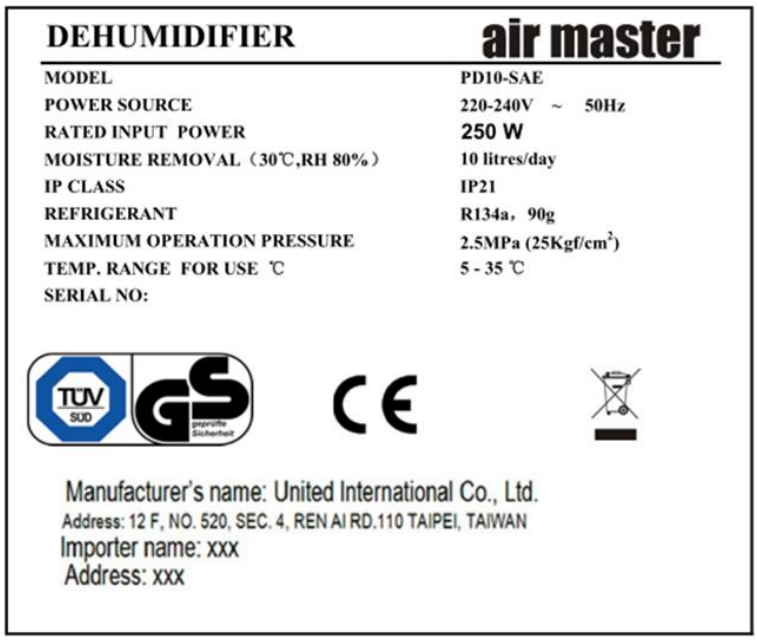
Tests performed (name of test and test clause):	**Testing location:**
1. EN 60335-2-40:2003 + A11:2004 + A12:2005 + A1:2006 + A2:2009 + A13:2012, EN 60335-1:2012+ A11:2014 and EN 62233: 2008. 2. The full tests were carried out on models PD10-SAE, PD12-SBE, PD12-SYE, PD12-SYR, PD12-SAR, PD12-SAR, PD12-SAE, PD12-SBE, PD16-SBE, PD16-SYR, PD16-SAR, PD16-SYE, PD19-SYE, PD20-SBE, PD20-SYE, PD20-SAE, PD25-SYE, PD25-SYR and additional tests were carried out on models PD10-IAR , PD12-SAE, PD20-IBR. Construction checks were carried out on other models. 3. For 64.111.08.1321.16 Rev.02, additional test of clause 10, 11, 13, 19, 22.5 and 24.5 were carried out on PD20-IBR. 4. For this report, not test was required.	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch 5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West, Guangzhou 510656, P. R. China

Summary of compliance with National Differences:

List of countries addressed:

Germany

Copy of marking plate:



Remark:

1. Label for PD10-SAE(Compressor: NS36HAEG)
2. Labels of PD10-yyz are same except model and IP Class.

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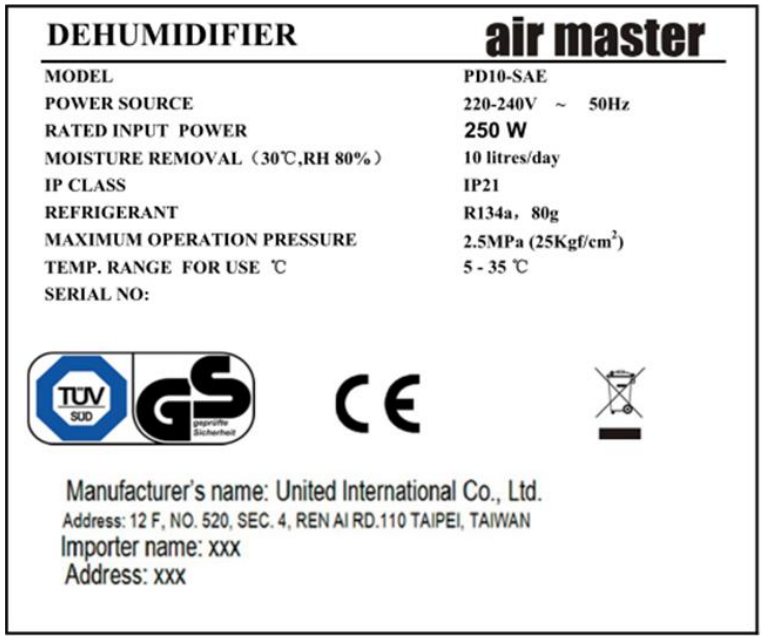
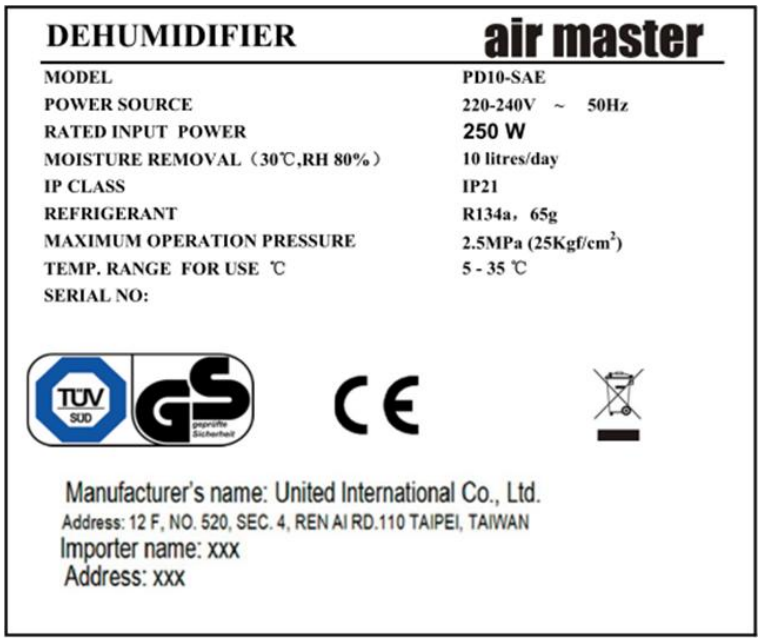


Remark:

1. Label for PD10-SAE(Compressor: FE140Y-E);
2. Labels of PD10-yyz are same except model and IP Class.



Remark:

1. Label for PD10-SAE(Compressor: FH170M-E);
2. Labels of PD10-yyz are same except model and IP Class.

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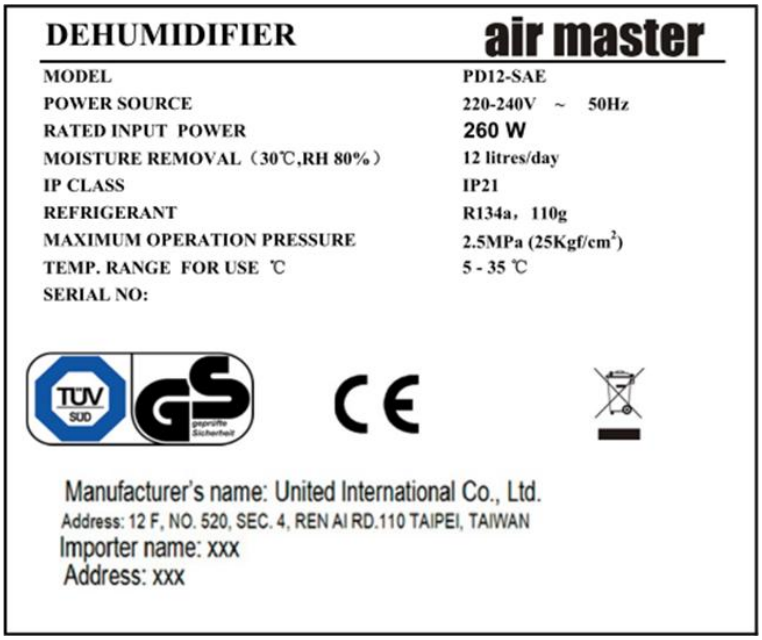
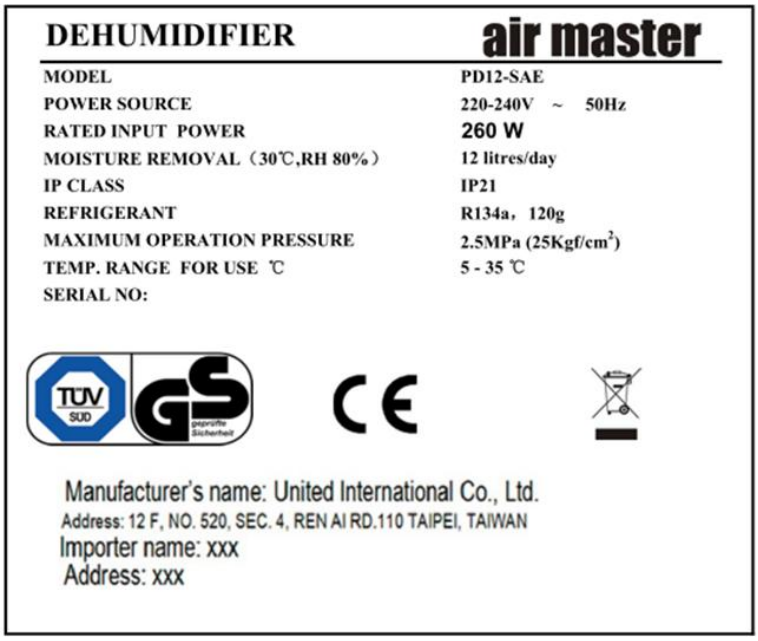


Remark:

1. Label for PD12-SAE(Compressor: NS36HAEG);
2. Labels of PD12-yyz are same except model and IP Class.



Remark:

1. Label for PD12-SAE(Compressor: FE140Y-E);
2. Labels of PD12-yyz are same except model and IP Class.

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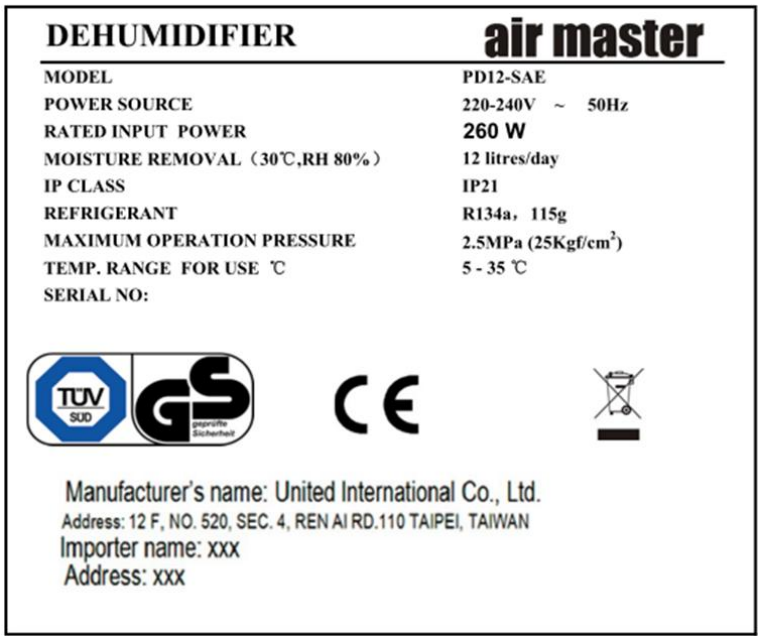
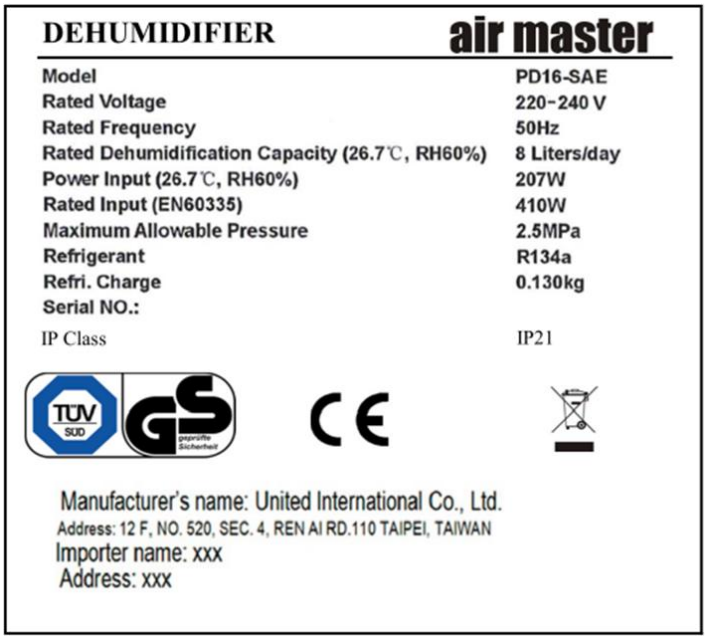


Remark:

1. Label for PD12-SAE(Compressor: FH170M-E);
2. Labels of PD12-yyz are same except model and IP Class.



Remark:

1. Label for PD16-SAE(Compressor: FH210Y-E);
2. Labels of PD16-yyz are same except model and IP Class.

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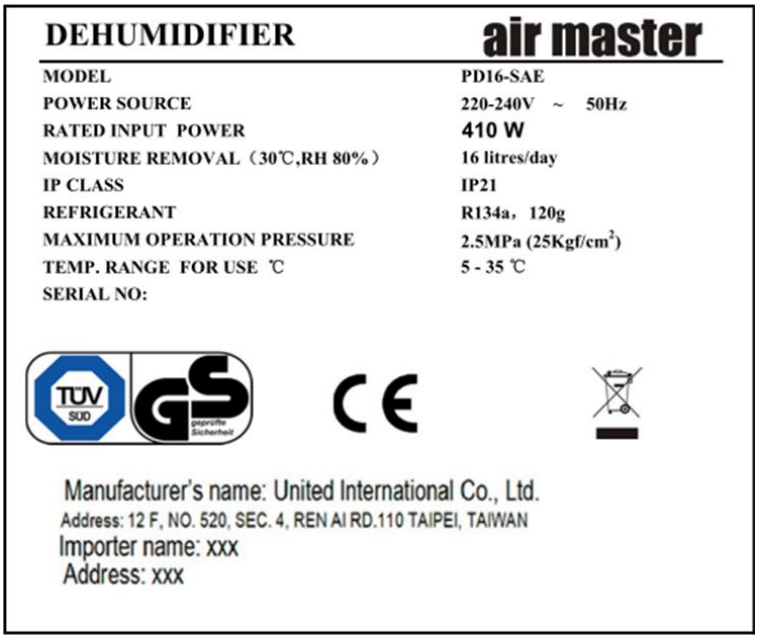
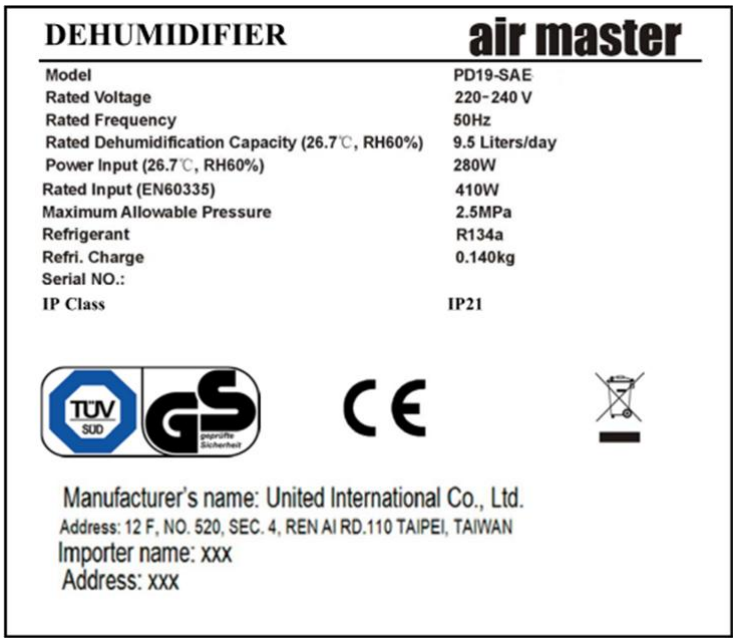


Remark:

1. Label for PD16-SAE(Compressor: FH250Y2-E);
2. Labels of PD16-yyz are same except model and IP Class.



Remark:

1. Label for PD19-SAE(Compressor: FH250Y2-E);
2. Labels of PD19-yyz are same except model and IP Class.

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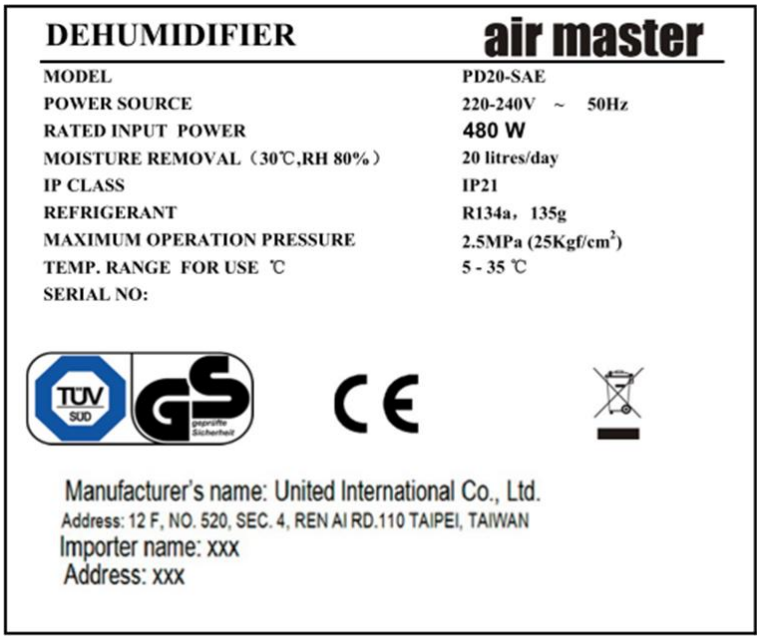
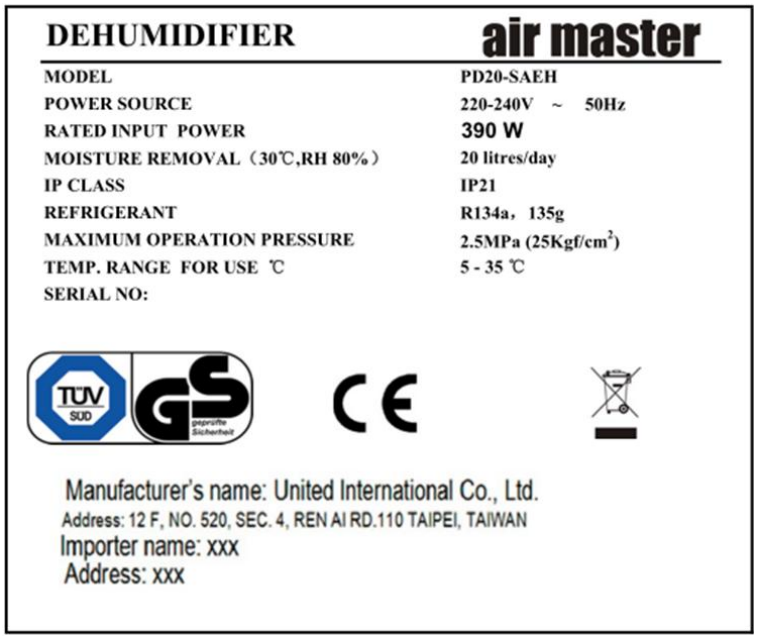


Remark:

1. Label for PD20-SAE(Compressor: FH300Y2-E);
2. Labels of PD20-yyz are same except model and IP Class.



Remark:

1. Label for PD20-SAEH(Compressor: FH300Y2-E);
2. Labels of PD20-yyzH are same except model and IP Class.

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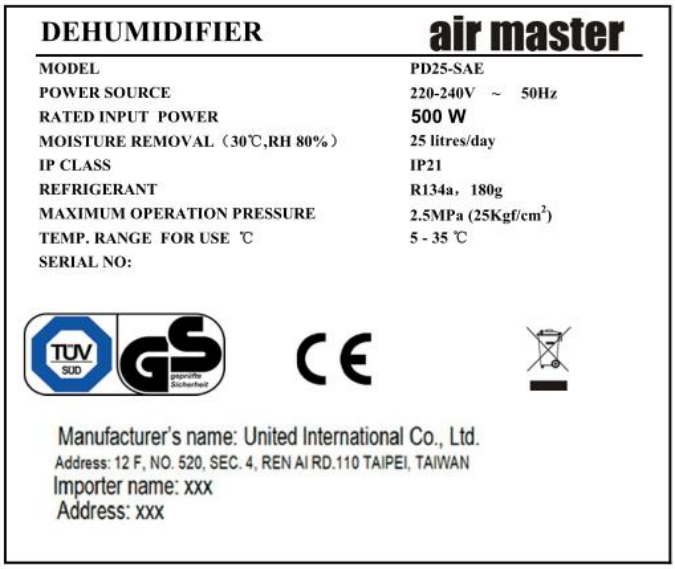
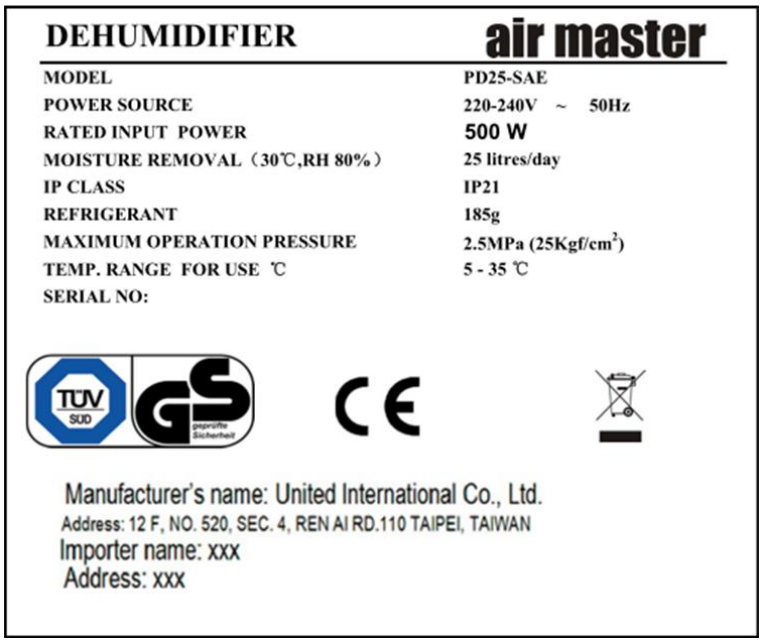
Label for PD25-SAE (Compressor:FH300Y2-E)



Remark: 1:Labels of PD25-yyz are same except model.

Remark:

1. Label for PD25-SAE(Compressor: FH300Y2-E);
2. Labels of PD25-yyz are same except model and IP Class.



Remark:

1. Label for PD25-SAE(Compressor: FH370Y2-E);
2. Labels of PD25-yyz are same except model and IP Class.

Remark:

Note 1: The height of CE marking shall be higher than 5mm and the height of WEEE marking shall be higher than 7mm.

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Note 2: According to the German product safety law (ProdSG), the name and address of manufacturer (an EU-based importer or authorized representative if the manufacturer is not based in EU) shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Note 3: According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Note 4: For detail information see model list on page 12 ~ page 13.

Note 5: IP CLASS information see model list page 12~page 13, when IPX0 need not be marked.

Test item particulars.....:	**--**
Classification of installation and use.....:	Portable appliance
Supply Connection.....:	Non detachable cord with plug
.....:	**--**
Possible test case verdicts:	**--**
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing.....:	**--**
Date of receipt of test item .....:	2008-11-24, 2009-04-20, 2009-07-24, 2009-09-24, 2010-04-01, 2010-05-08, 2010-07-01, 2010-10-11, 2011-04-24, 2011-07-01, 2011-11-01, 2012-01-01, 2012-03-11, 2012-04-11, 2012-07-11, 2012-11-01, 2012-12-07, 2013-09-22, 2014-01-06, 2014-03-25, 2014-08-15, 2015-01-02, 2015-01-30, 2015-03-18, 2015-07-09, 2015-12-16, 2016-05-01, 2016-09-20
Date (s) of performance of tests.....:	2008-11-24~2008-12-03, 2009-04-20~2009-05-11, 2009-07-24~2009-08-28, 2009-09-24~2009-11-09, 2010-04-01~2010-04-22, 2010-05-08~2010-05-13, 2010-07-01~2010-07-06, 2010-10-11~2010-10-14, 2011-04-24~2011-05-11, 2011-07-01~2011-07-11, 2011-11-03~2011-11-24, 2012-01-03~2012-01-16, 2012-03-13~2012-03-29, 2012-04-13~2012-04-29, 2012-07-13~2012-07-25, 2012-11-01~2012-11-15, 2012-12-07~2013-01-31, 2013-09-23~2013-10-18, 2014-01-06~2014-01-16, 2014-03-25~2014-04-01, 2014-08-15~2014-09-11, 2015-01-02~2015-01-15, 2015-01-30~2015-02-02, 2015-03-18~2015-03-20, 2015-07-09~2015-07-15, 2015-12-16~2015-12-18, 2016-05-01~2016-05-23, 2016-09-20~2016-10-18

General remarks:

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

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

This TRF includes an appendix EMF containing the IEC/EN 62233 requirements (see below).

IEC 62233:2005 (1. Edition)
EN 62233:2008 (incl. Corr.1:2008)

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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) .....: Zhongshan Lianchang Co., Ltd.
No. 72 Chang Jiang Road 528403 Zhongshan City, Guangdong Province PEOPLE'S REPUBLIC OF CHINA.

General product information:

1. These appliances are Dehumidifiers.
2. This report is based on report 64.111.08.1321.16 Rev.02, issued for adding the models PD20-yyzH, after evaluation, not test was required.
3. The main power is supplied via the indoor unit by a 3-pole supply cable with plug which supplied by manufactory.
4. The models PDxx-DAR (xx=10, 12, 16, 19, 20 indicate capacity) is the same as previous model PDxx-SAR except for appearance.
5. The models PDxx-DAE (xx=10, 12, 16, 19, 20 indicate capacity) is the same as previous model PDxx-SAE except for appearance.
6. The models PDxx-DBE (xx=10, 12, 16, 19, 20 indicate capacity) is the same as model PDxx-DAE except for the position of the display panel.
7. The models PDxx-SJR (xx=10, 12, 16, 19, 20 indicate capacity) is the same as model PDxx-SAR except for appearance.
8. The models PDxx-SJE (xx=10, 12, 16, 19, 20 indicate capacity) is the same as model PDxx-SAE except for appearance.
9. The models PDxx-IAR, PDxx-IBR (xx=10, 12, 16, 19, 20 indicate capacity) is the same as model PDxx-SJR except for appearance.
10. The models PD20-yyzH is the same as PD20-yyz, except for the compressor capacitor; the models PD20-yyz used two different sizes compressor capacitor 4,0μF or 8,0μF, but the models PD20-yyzH only used compressor capacitor of 8,0μF.
11. Naming method:
    PDxx-yyzw
    "xx"=10; 12; 16; 19; 20; 25(when y=B, Y); indicates different dehumidifying capacity;
    "yy"=SY; SB; SA; SD, SC, SE, SF, SJ,SG, SH, CA, BA, DA, DB,IA,IB; indicates different panel;
    "z"=R(when "yy"=SY, SA, SD, SC, SE, SF, SG, SH, SJ, CA, BA, DA,IA,IB), indicates mechanical control type;
    E indicates electronic control type;
    M (when "yy"=SA, CA) indicates mono-key control type;
    N (when "yy"= SA, SD) indicates electronic control type installed front panel;
    M (when "yy"= SD) indicates electronic control type installed front panel;
    w=H(when "xx"= 20), BLANE.
12. The manufacturer/ Importer has to ensure the appliance placing on the EU market conforms to the applicable EU directives which provide the affixing of the CE marking, such as LVD, EMC, RoHS, ErP, and so on.
13. Requirements of AfPS GS 2014:01 PAK have been evaluated and found to be met by evaluation and/or relevant test.

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13. Model list:

Input power	IP degree	Refrigerant	Model					
250W	IP21	R134a	PD10-SBE	PD10-SYE	--	--	--	--
			PD10-SAE	PD10-SAM	PD10-SDE	PD10-SAN	PD10-SDN	PD10-SDM
			PD10-SEE	PD10-SFE	PD10-SJE	--	--	--
260W	IP21	R134a	PD12-SBE	PD12-SYE	--	--	--	--
			PD12-SAE	PD12-SAM	PD12-SDE	PD12-SAN	PD12-SDN	PD12-SDM
			PD12-SEE	PD12-SFE	PD12-SJE	--	--	--
410W	IP21	R134a	PD16-SBE	PD16-SYE	--	--	--	--
			PD16-SAE	PD16-SAM	PD16-SDE	PD16-SAN	PD16-SDN	PD16-SDM
			PD16-SEE	PD16-SFE	PD16-SJE	--	--	--
410W	IP21	R134a	PD19-SAE	PD19-SAM	PD19-SDE	PD19-SAN	PD19-SDN	PD19-SDM
			PD19-SEE	PD19-SFE	PD19-SJE	--	--	--
			PD19-SBE	PD19-SYE	--	--	--	--
480W	IP21	R134a	PD20-SBE	PD20-SYE	--	--	--	--
			PD20-SAE	PD20-SAM	PD20-SDE	PD20-SAN	PD20-SDN	PD20-SDM
			PD20-SEE	PD20-SFE	PD20-SJE	--	--	--
390W	IP21	R134a	PD20-SBEH	PD20-SYEH	--	--	--	--
			PD20-SAEH	PD20-SAMH	PD20-SDEH	PD20-SANH	PD20-SDNH	PD20-SDMH
			PD20-SEEH	PD20-SFEH	PD20-SJEH	--	--	--
500W	IP21	R134a	PD25-SBE	PD25-SYE	--	--	--	--

Input power	IP degree	refrigerant	Model					
250W	IPX0	R134a	PD10-SCR	PD10-SCE	PD10-SGR	PD10-SGE	PD10-SHR	PD10-SHE
			PD10-CAR	PD10-CAE	PD10-BAR	PD10-DAR	PD10-DAE	PD10-DBE
			PD10-SYR	PD10-SAR	PD10-SDR	PD10-SER	PD10-SFR	PD10-SJR
			PD10-IAR	PD10-IBR	--	--	--	--
260W	IPX0	R134a	PD12-SCR	PD12-SCE	PD12-SGR	PD12-SGE	PD12-SHR	PD12-SHE
			PD12- CAR	PD12-CAE	PD12-BAR	PD12-DAR	PD12-DAE	PD12-DBE
			PD12-SYR	PD12-SAR	PD16-SDR	PD12-SER	PD12-SFR	PD12-SJR

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			PD12-IAR	PD12-IBR	--	--	--	--
410W	IPX0	R134a	PD16-SCR	PD16-SCE	PD16-SGR	PD16-SGE	PD16-SHR	PD16-SHE
			PD16- CAR	PD16-CAE	PD16-BAR	PD16-DAR	PD16-DAE	PD16-DBE
			PD16-SYR	PD16-SAR	PD16-SDR	PD16-SER	PD16-SFR	PD16-SJR
			PD16-IAR	PD16-IBR	--	--	--	--
410W	IPX0	R134a	PD19-SCR	PD19-SCE	PD19-SGR	PD19-SGE	PD19-SHR	PD19-SHE
			PD19- CAR	PD19-CAE	PD19-BAR	PD19-DAR	PD19-DAE	PD19-DBE
			PD19-SYR	PD19-SAR	PD19-SDR	PD19-SER	PD19-SFR	PD19-SJR
			PD19-IAR	PD19-IBR	--	--	--	--
480W	IPX0	R134a	PD20-SCR	PD20-SCE	PD20-SGR	PD20-SGE	PD20-SHR	PD20-SHE
			PD20- CAR	PD20-CAE	PD20-BAR	PD20-DAR	PD20-DAE	PD20-DBE
			PD20-SYR	PD20-SAR	PD20-SDR	PD20-SER	PD20-SFR	PD20-SJR
			PD20-IAR	PD20-IBR	--	--	--	--
390W	IPX0	R134a	PD20-SCRH	PD20-SCEH	PD20-SGRH	PD20-SGEH	PD20-SHRH	PD20-SHEH
			PD20-CARH	PD20-CAEH	PD20-BARH	PD20-DARH	PD20-DAEH	PD20-DBEH
			PD20-SYRH	PD20-SARH	PD20-SDRH	PD20-SERH	PD20-SFRH	PD20-SJRH
			PD20-IARH	PD20-IBRH	--	--	--	--
500W	IPX0	R134a	PD25-SYR	--	--	--	--	--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		--
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.		P
5.2	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/A1)		P
	At least one additional specially prepared sample required for tests of annex FF (Leak simulation tests) (IEC 60335-2-40/A1)		N/A
	Temperatures on refrigerant piping measured during test of clause 11 (IEC 60335-2-40/A1)		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)		N/A
	Refrigerant line length is maximum length stated in installation instructions or (IEC 60335-2-40)		N/A
	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)		N/A
5.101	Motor-compressor subjected to relevant test of clause 19 of IEC 60335-2-34, unless (IEC 60335-2-40)		N/A
	motor-compressor comply with that standard (IEC 60335-2-40)	Approved	P
5.102	Motor-compressors tested and comply with IEC 60335-2-34 need not additionally tested for clause 21 (IEC 60335-2-40/A1)		N/A
6	CLASSIFICATION		--
6.1	Protection against electric shock: Class I, II, III (IEC 60335-2-40).....:	Class I	P
6.2	Protection against harmful ingress of water, IP degree in accordance with IEC 60529 (IEC 60335-2-40)		--
	- appliances or parts intended for outdoor use be at least IPX4 (IEC 60335-2-40);		N/A
	- appliances intended only for indoor use (excluding laundry rooms) be IPX0 (IEC 60335-2-40);	IPX0 (See model list on pages 12-13)	P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- appliances intended to be used in laundry rooms be at least IPX1 (IEC 60335-2-40).	IP21, (See model list on pages 12-13)	P
6.101	Degree of accessibility (accessible/not accessible to the general public) (IEC 60335-2-40)	Accessible to the general public	P
7	MARKING AND INSTRUCTIONS		--
7.1	Rated voltage or voltage range (V)..... :	220-240V	P
	Symbol for nature of supply including number of phases, unless for single phase operation (IEC 60335-2-40)..... :	~	N/A
	Rated frequency (Hz)..... :	50	P
	Rated power input (W), or..... :	See rating labels	P
	Rated current (A) ..... :		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark..... :	air master	P
	Model or type reference..... :	See rating labels	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0..... :	IP21, (See model list on pages 12-13)	P
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only		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)..... :	See rating labels	P
	Refrigerant identification (IEC 60335-2-40)..... :	R134a	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/A2)..... :		N/A
	Permissible excessive operating pressure of refrigerant circuit for suction and discharge, if they differ (IEC 60335-2-40) ..... :	Maximum operation pressure:2,5MPa	P
	Symbol for degree of protection against ingress of water, other than IPX0 (IEC 60335-2-40)..... :	IP21, (See model list on pages 12-13)	P
	Separate marking of appliances with all rated characteristics of supplementary heaters (IEC 60335-2-40)..... :	No supplementary heaters used.	N/A
	Marking of direction of fluid flow (IEC 60335-2-40)		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Flame symbol and instruction manual symbol of 7.6 visible when flammable refrigerant employed and following conditions exist (IEC 60335-2-40/A1):		--
	- accessing parts expected to be subjected to maintenance or repair (IEC 60335-2-40/A1);		N/A
	- observing appliance under sale or installed conditions (IEC 60335-2-40/A1);		N/A
	- observing appliance packaging, if appliance charged with refrigerant (IEC 60335-2-40/A1).		N/A
	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/A1 corr.1)		N/A
	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/A1)		N/A
	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/A1)		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/A1)		N/A
	Maximum allowable pressure for low-pressure side and high-pressure side marked on product (IEC 60335-2-40/A1)		N/A
	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/A1)		N/A
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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, the voltage 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		--
	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/A1)		N/A
	Flammable refrigerant, symbol requiring reference to manual [0790 of ISO 7000], including colour and format, permanently placed on appliance (IEC 60335-2-40/A1 corr.1)		N/A
	Symbol for nature of supply placed next to rated voltage		N/A
	Symbol for class II appliances placed unlikely to be confused with other marking		N/A
	Units of physical quantities and their symbols according to international standardized system		N/A
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless		N/A
	correct mode of connection is obvious		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		--
	- marking of terminals exclusively for the neutral conductor (letter N)		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking not placed on removable parts		N/A
7.9	Marking or placing of switches which may cause a hazard		N/A
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means .....:	"ON/OFF", "Timer" and so on were used.	P
	This applies also to switches which are part of a control		P
	If figures are used, the off position indicated by the figure 0		N/A
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N/A
7.11	Indication for direction of adjustment of controls		P
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	Appliances not accessible to general public, classification of clause 6.101 included (IEC 60335-2-40)		N/A
	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/A1)		N/A
	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	Refer to attachment no.2	N/A
	- children being supervised not to play with the appliance	Refer to attachment no.2	N/A
	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
7.12.1	Sufficient details for installation supplied		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated		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
	- 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);		N/A
	- 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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		N/A
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		--
	- dimensions of space		N/A
	- dimensions and position of supporting and fixing		N/A
	- minimum distances between parts and surrounding structure		N/A
	- minimum dimensions of ventilating openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N/A
	a switch complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for appliances incorporating a non-self-resetting thermal cut-out that is reset by disconnection of the supply mains, if this cut-out is required to comply with the standard		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		--
	- max. inlet water pressure (Pa) .....:		N/A
	- min. inlet water pressure, if necessary (Pa).....:		N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.13	Instructions and other texts in an official language	English and German	P
7.14	Marking clearly legible and durable, rubbing test as specified		P
7.15	Markings on a main part		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	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		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		N/A
	Marking on panel allowed, provided panel in place for intended operation of appliance (IEC 60335-2-40)		N/A
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
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		--
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P
	Use of test probe B of IEC 61032 through openings, with a force of 20 N: no contact with live parts		P
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts	Class II construction	P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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		N/A
	- or separated from live parts by protective impedance		N/A
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0,7 mA		N/A
	- for peak values over 42,4 V up to and including 450 V, capacitance not exceeding 0,1 μF		N/A
	- 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		N/A
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only	Class II construction	P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
9	STARTING OF MOTOR-OPERATED APPLIANCES		--
	Requirements and tests are specified in part 2 when necessary		N/A
10	POWER INPUT AND CURRENT		--
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1. :	(see appended table)	P
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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)	N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated current is related to the arithmetic mean value of the range		N/A
11	HEATING		--
11.1	No excessive temperatures in normal use (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):		--
	- 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);		N/A
	- adjustable limit controls set at maximum cut-out setting and minimum differential (IEC 60335-2-40).		N/A
	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)		N/A
11.3	Temperature rise determine by thermocouples or resistance method (IEC 60335-2-40)	Resistance method: fan motor, transformer; Thermocouples method: other parts	P
11.4	Test performed at supply voltage between 0,94 and 1,06 times the rated voltage (IEC 60335-2-40)	206,8 V~ and 254,4 V~	P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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)		N/A
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		--
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 V~	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		P
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		N/A
	For other appliances, a low impedance ammeter may be used		P
	Leakage current measurements..... : (IEC 60335-2-40)	(see appended table)	P
13.3	The appliance is disconnected from the supply		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength tests according to table 4 ..... :	(see appended table)	P
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		--
	Appliances withstand the transient over-voltages to which they may be subjected		P
	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		--
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/A2)		P
15.2	Tests in accordance with IEC 60529 in appliances other than IPX0, as specified (IEC 60335-2-40)... :	IP21, (See model list on pages 12-13)	P
15.3	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/A2)		P
	After spillage completed, appliance withstand test of clause 16 (IEC 60335-2-40/A2)		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		--
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		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 V~	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:		--
	- all controls have an off position in all poles, or		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified..... :	(see appended table)	P
16.3	Electric strength tests according to table 7 ..... :	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified ..... :	(see appended table)	N/A
	No breakdown during the tests		P
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		--
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use ..... :	(see appended table)	P
	Appliance supplied with 1,06 or 0,94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V) ..... :	254,4V	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		N/A
	Temperature of the winding not exceeding the value specified in table 8		P
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
18	ENDURANCE		--
	Requirements and tests are specified in part 2 when necessary		N/A
19	ABNORMAL OPERATION		--
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated (tests 19.2-19.14) (IEC 60335-2-40)		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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
19.2	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 attached components list	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
	At the end, leakage current between windings and enclosure does not exceed 2 mA (IEC 60335-2-40)		P
19.3	Motor-compressor complies with IEC 60335-2-34 (IEC 60335-2-40)	Approved	P
	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)		N/A
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)		N/A
19.5	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)		P
19.6	Test of appliances using water as heat transfer medium (IEC 60335-2-40)		N/A
19.7	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)	(see appended table)	P
	Test with the dry-bulb temperature 10 K over the values specified by manufacturer (IEC 60335-2-40)	(see appended table)	P
19.8	Test of appliances with supplementary heaters (IEC 60335-2-40)		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
19.9	Test at temperature permitting continuous operation of the motor-compressor and electric heating elements at same time (IEC 60335-2-40)		N/A
19.10	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/A2)		N/A
	However, controls not short-circuited but one end of element connected to sheath of heating element (IEC 60335-2-40/A2)		N/A
	Test repeated with polarity of supply to appliance reversed and with other end of element connected to sheath (IEC 60335-2-40/A2)		N/A
	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/A2)		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
	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)		P
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):		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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)		N/A
	b) open circuit at terminals of any component (IEC 60335-2-40)	(see appended table)	P
	c) short circuit if capacitors, unless they comply with IEC 60384-14 (IEC 60335-2-40)	(see appended table)	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)	(see appended table)	P
	e) failure of triacs in diode mode (IEC 60335-2-40)	(see appended table)	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)	(see appended table)	P
	Short-circuit of low-power circuits (IEC 60335-2-40)		N/A
	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
19.12	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
	Current ≤ 2,1 times rated current of fuse-link, circuit not adequately protected (fuse-link short-circuited) (IEC 60335-2-40)		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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	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/A2)		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
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/A2)		N/A
	During test temperature not exceed 150 °C but an overshoot of 25 °C is permitted during first hour (IEC 60335-2-40/A2)		N/A
20	STABILITY AND MECHANICAL HAZARDS		--
20.1	Appliances having adequate stability		P
	Tilting test through an angle of 10°, appliance placed on an inclined plane/horizontal support, not connected to the supply mains; appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		N/A
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable, and		P
	have adequate mechanical strength		P
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure	Used for motor-compressor and fan motor	P
	Not possible to touch dangerous moving parts with the test probe described		P
21	MECHANICAL STRENGTH		--
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/A1)		P
	Safety requirements of ISO 5149 applied (IEC 60335-2-40/A2)		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		P
22	CONSTRUCTION		--
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		P
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		--
	- a supply cord fitted with a plug, or		N/A
	- a switch complying with 24.3, or		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided, or		N/A
	- an appliance inlet		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	Voltage not exceeding 34 V (V)..... :	4,7V	P
22.6	Electrical insulation not affected by condensing water or leaking liquid		P
	Electrical insulation of class II appliances not affected if a hose ruptures or seal leaks		N/A
	In case of doubt, test as described		N/A
	Electrical insulation not affected by snow penetration to appliance enclosure (IEC 60335-2-40)		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances containing liquid or gases or having steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		P
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless		N/A
	the substance has adequate insulating properties		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance, if:		N/A
	- a non-self-resetting thermal cut-out is required by the standard, and		N/A
	- a voltage maintained non-self-resetting thermal cut-out is used to meet it		N/A
	Non-self-resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Reset buttons of non-self-resetting controls so located or protected that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner		N/A
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		N/A
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		N/A
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		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		N/A
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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands and no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		N/A
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		N/A
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		N/A
22.26	For class III constructions the insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.28	Metal parts of class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
22.33	Conductive liquids that are or may become accessible in normal use and conductive liquids that are in contact with unearthed accessible metal parts are not in direct contact with live parts		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		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	the reinforced insulation consists of at least 3 layers		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation, unless		N/A
	the reinforced insulation consists of at least 3 layers		N/A
	An air layer not used as basic or supplementary insulation in a double insulation system if likely to be bridged by leaking liquid		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		N/A
	the shaft is not accessible when the part is removed		N/A
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		N/A
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.36	For appliances other than class III, handles continuously held in the hand in normal use so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless		N/A
	they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in class II appliances not connected to accessible metal parts and their casings, if of metal, separated from accessible metal parts by supplementary insulation, unless		N/A
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
	Resistors checked by the test of 14.1 a) in IEC 60065		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1		N/A
	Software that contains measures to control the fault/error conditions specified in table R.2 is to be specified in parts 2 for particular constructions or to address specific hazards		N/A
	These requirements are not applicable to software used for functional purpose or compliance with clause 11		N/A
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	There is a control on the appliance manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	These requirements not necessary on appliances that can operate as follows, without giving rise to a hazard:		--
	- continuously, or		N/A
	- automatically, or		N/A
	- remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.101	Appliances intended to be fixed, securely fixed (IEC 60335-2-40)		N/A
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/A2)		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/A2)		N/A
	However, for appliances intended to be connected to fixed wiring, the neutral conductor need not be disconnected (IEC 60335-2-40/A2)		N/A
22.102.3	Thermal cut-outs of capillary type open in event of leakage from capillary tube (IEC 60335-2-40/A2)		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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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/A1)		P
22.113	Flammable refrigerant used, refrigerant tubing protected or enclosed to avoid mechanical damage (IEC 60335-2-40/A1)		N/A
	Tubing protected to extent that it will not be handled or used for carrying during moving of product (IEC 60335-2-40/A1)		N/A
	Tubing located within confines of cabinet considered to be protected from mechanical damage (IEC 60335-2-40/A1)		N/A
22.114	Flammable refrigerant used, low temperature solder alloys, such as lead/tin alloys, not acceptable for pipe connections (IEC 60335-2-40/A1)		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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/A1)		N/A
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/A1)		N/A
	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/A1)		N/A
	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/A1):		--
	- 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/A1)		N/A
	- 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/A1)		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/A1)		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/A1)		N/A
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/A1)		N/A
	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/A1):		--

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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/A1)		N/A
	- Reusable mechanical connectors and flared joints are not allowed indoors (IEC 60335-2-40/A1)		N/A
	- Refrigerant tubing shall be protected or enclosed to avoid damage (IEC 60335-2-40/A1)		N/A
	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/A1)		N/A
23	INTERNAL WIRING		--
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well-rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		P
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges		N/A
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		N/A
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use, or		N/A
	100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test of 16.3, 1000 V between live parts and accessible metal parts		N/A
	Not more than 10 % of the strands of any conductor broken, and		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	not more than 30 % for wiring supplying circuits that consume no more than 15 W		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
23.5	The insulation of internal wiring subjected to the supply mains voltage withstanding the electrical stress likely to occur in normal use		P
	Basic insulation electrically equivalent to the basic insulation of cords complying with IEC 60227 or IEC 60245, or		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
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		--
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components..... :	(see appended table)	P
	If components have not been tested and found to comply with relevant IEC standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A
	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		N/A
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P

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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)		N/A
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14		P
	If the capacitors have to be tested, they are tested according to annex F		N/A
24.1.2	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	Approved	P
	If they have to be tested, they are tested according to annex H		N/A
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	If the switch only operates a motor 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	10 000	P
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		N/A
	- voltage maintained non-self-resetting thermal cut-outs:..... 1 000		N/A
	- other non-self-resetting thermal cut-outs:..... 30	30	P
	- timers:..... 3 000		N/A
	- energy regulators:..... 10 000		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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	100 000	P
	- 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	Approved	P
	- 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	Approved	P
	- 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		N/A
	Thermal motor protectors are tested in combination with their motor under the conditions specified in annex D		N/A
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A
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
24.1.7	For remote operation of the appliance via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691		P
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of clause 19		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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..... :	100 000	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		N/A
	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		P
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load	(See appended table)	P
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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure		P
	One or more of the following conditions are to be met:		--
	- the capacitors are of class P2 according to IEC 60252-1		P
	- 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		--
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		--
	- supply cord fitted with a plug,		P
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or		N/A
	- pins for insertion into socket-outlets		N/A
	Supply cord fitted with plug provided, if (IEC 60335-2-40):		--
	- appliance only for indoor use (IEC 60335-2-40),		P
	- marked with rating of 25 A or less and (IEC 60335-2-40)		P
	- complies with code requirements of country where it will be used (IEC 60335-2-40).		P
	Appliance inlet not allowed (IEC 60335-2-40)		P
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:		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- a set of terminals allowing the connection of a flexible cord		N/A
	- a fitted supply cord		N/A
	- a set of supply leads accommodated in a suitable compartment		N/A
	- a set of terminals for the connection of cables of fixed wiring, cross-sectional areas specified in 26.6, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	- a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate types of cable or conduit, and the appliance allows the connection of the supply conductors after the appliance has been fixed to its support		N/A
	For a fixed appliance constructed so that parts can be removed to facilitate easy installation, this requirement is met if it is possible to connect the fixed wiring without difficulty after a part of the appliance has been fixed to its support		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10 (mm)..... :		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in clause 29		N/A
25.5	Method for assembling the supply cord to the appliance:		--
	- type X attachment		N/A
	- type Y attachment		P
	- type Z attachment, if allowed in relevant part 2		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
	For multi-phase appliances supplied with a supply cord and that are intended to be permanently connected to fixed wiring, the supply cord is assembled to the appliance by type Y attachment		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords, other than for class III appliances, being one of the following types:		--
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 88)		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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	H05VV-F or H05RN-F or H05RR-F	P
	- 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		P
	Supply cords for outdoor use not lighter than polychloroprene sheathed flexible cord (60245 IEC 57) (IEC 60335-2-40)		N/A
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm²)..... :	Measured current: 2,50A Cross-section area: 0,75mm² or 1,0mm²	P
25.9	Supply cords not in contact with sharp points or edges		P
25.10	Supply cord of class I appliances have a green/yellow core for earthing		P
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		P
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		N/A
	If unsheathed supply cord, a similar additional bushing or lining is required, unless the appliance is		N/A
	class 0, or		N/A
	a class III appliance not containing live parts		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		--
	- applied force (N) ..... :		N/A
	- number of flexings ..... :		N/A
	The test does not result in:		--
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		N/A
	- breakage of more than 10 % of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
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, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm) ..... :	100N; 0,35Nm	P
	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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A
	the appliance becomes inoperative or incomplete or the parts cannot be removed without a tool		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for class 0, 0I and I appliances they are of insulating material or are provided with an insulating lining, unless		N/A
	failure of the insulation of the cord does not make accessible metal parts live		N/A
	- for class II appliances they are of insulating material, or		N/A
	if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
	After the test of 25.15, under the conditions specified, the conductors have not moved by more than 1 mm in the terminals		N/A
25.17	Adequate cord anchorages for type Y and Z attachment, test with the cord supplied with the appliance		P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	Constructed so that the cord can only be fitted with the aid of a tool		P
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	The insulated conductors of the supply cord for type Y and Z attachment additionally insulated from accessible metal parts		P
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed:		--
	- to permit checking of conductors with respect to correct positioning and connection before fitting any cover		N/A
	- so there is no risk of damage to the conductors or their insulation when fitting the cover		N/A
	- for portable appliances, so that the uninsulated end of a conductor, if it becomes free from the terminal, prevented from contact with accessible metal parts		P
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A

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

25.22	Appliance inlets:		--
	- live parts not accessible during insertion or removal		N/A
	Requirement not applicable to appliance inlets complying with IEC 60320-1		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- not for cold conditions if temp. rise of external metal parts exceeds 75 K during clause 11, unless		N/A
	the supply cord is unlikely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except that:		N/A
	- the cross-sectional area of the conductors is determined on the basis of the maximum current during clause 11		N/A
	- the thickness of the insulation may be reduced		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with this standard is impaired when they are disconnected		N/A
25.25	Dimensions of pins that are inserted into socket-outlets compatible with the dimensions of the relevant socket-outlet.		N/A
	Dimensions of pins and engagement face in accordance with the dimensions of the relevant plug in IEC/TR 60083		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		--
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P
	Terminals only accessible after removal of a non-detachable cover, except		P
	for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		N/A
	the connections are soldered		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Screws and nuts not used to fix any other component, except		N/A
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N/A
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		N/A
	Terminals fixed so that when the clamping means is tightened or loosened:		--
	- the terminal does not become loose		N/A
	- internal wiring is not subjected to stress		N/A
	- neither clearances nor creepage distances are reduced below the values in clause 29		N/A
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified (Nm) ..... :		N/A
	No deep or sharp indentations of the conductors		N/A
26.4	Terminals for type X attachment, except those having a specially prepared cord and those for the connection of cables of fixed wiring, no special preparation of conductors such as by soldering, use of cable lugs, eyelets or similar, and		N/A
	so constructed or placed that conductors prevented from slipping out when clamping screws or nuts are tightened		N/A
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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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)..... :		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless		P
	conductors ends fitted with means suitable for screw terminals		P
	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		P
	For class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A
	If soldering, welding or crimping alone used, barriers provided so that clearances and creepage distances between live parts and other metal parts are not reduced below the values for supplementary insulation if the conductor becomes free		N/A
27	PROVISION FOR EARTHING		--
27.1	Accessible metal parts of class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P
	Class 0, II and III appliances have no provision for earthing		N/A
	Safety extra-low voltage circuits not earthed, unless		N/A
	protective extra-low voltage circuits		N/A
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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
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
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		P
	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
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 at the specified low-resistance test (Ω) ..... :	0,051 Ω	P
27.6	The printed conductors of printed circuit boards not used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
28	SCREWS AND CONNECTIONS		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		P
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connections or connections providing earthing continuity		N/A
	Screws used for electrical connections or connections providing earthing continuity screwed into metal		P
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		P
	For type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw impairs basic insulation		N/A
	For screws and nuts; torque-test as specified in table 14 ..... :	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure is not transmitted through non-ceramic insulating material liable to shrink or distort, unless		P
	there is resiliency in the metallic parts to compensate for shrinkage or distortion of the insulating material		N/A
	This requirement does not apply to electrical connections in circuits of appliances for which:		--
	- 30.2.2 is applicable and that carry a current not exceeding 0,5 A		N/A
	- 30.2.3 is applicable and that carry a current not exceeding 0,2 A		N/A
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		P
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		--
	- in normal use,		P
	- during user maintenance,		P
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		P
	At least two screws being used for each connection providing earthing continuity, unless		P
	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		N/A
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if the connections are subjected to torsion		N/A
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		--
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies ..... :		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation ..... :		N/A
	For motor-compressor not complying with IEC 60335-2-34, additions and modifications as specified (IEC 60335-2-40)		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless..... :	(see appended table)	P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500 V and above are increased by 0,5 mm and the impulse voltage test is not applicable		N/A
	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
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable .....:	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings considered to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16 .....:	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage .....:	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		N/A
29.1.4	Clearances for functional insulation are the largest values determined from:		--
	- table 16 based on the rated impulse voltage .....:	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		P
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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		N/A
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
	Lacquered conductors of windings considered to be bare conductors		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		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		N/A
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1, the clearances of reinforced insulation dimensioned as specified in Table F.7a are to withstand 160% of the withstand voltage required for basic insulation		N/A
	If clearances for basic insulation are selected from clause 4 of IEC 60664-4, the clearances of reinforced insulation are twice the value required for basic insulation		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation are based on the working voltage used as the rated voltage in table 15		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	- precautions taken to protect the insulation; pollution degree 1		N/A
	- 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 ..... :		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 ..... :		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable..... :		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or ..... :	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable..... :		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18 ..... :	(see appended table)	P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18 ..... :		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		--
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		P
	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- 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
	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		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		N/A
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19 ..... :		N/A
30	RESISTANCE TO HEAT AND FIRE		--
30.1	External parts of non-metallic material,		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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:		--
	parts having a mass not exceeding 0,5 g, provided the cumulative effect is unlikely to propagate flames that originate inside the appliance by propagating flames from one part to another, or		N/A
	decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		N/A
	Compliance checked by the test of 30.2.1, and in addition:		P
	- for attended appliances, 30.2.2 applies		N/A
	- for unattended appliances, 30.2.3 applies		P
	For appliances for remote operation, 30.2.3 applies		N/A
	For base material of printed circuit boards, 30.2.4 applies		P
30.2.1	Parts of non-metallic material subjected to the glow-wire test of IEC 60695-2-11 at 550 °C		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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N/A
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P
	The tests are not applicable to conditions as specified.....:		N/A
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and		P
	parts of non-metallic material, other than small parts, within a distance of 3 mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850 °C		P
	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		N/A
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 glow-wire test of IEC 60695-2-11		P
	The test severity is:		--
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation		P
	- 650 °C, for other connections		P
	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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	The glow-wire test is also not carried out on small parts. These parts are to:		--
	- comprise material having a glow-wire ignition temperature of at least 775 °C or 675 °C as appropriate, or		N/A
	- comprise material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- comply with the needle-flame test of annex E, or		N/A
	- comprise material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	The consequential needle-flame test of annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		--
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		P
	- 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		P
	Test not applicable to conditions as specified..... :		N/A
31	RESISTANCE TO RUSTING		--
	Relevant ferrous parts adequately protected against rusting		P

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	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
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		--
	Description of routine tests to be carried out by the manufacturer		P
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES		--
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	This annex does not apply to battery chargers		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
	- 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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006		N/A
7.6	Symbols 60417-5005 and IEC 60417-5006		N/A
7.12	The instructions give information regarding charging		N/A
	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N/A
	Details about how to remove batteries containing materials hazardous to the environment given		N/A
7.15	Markings placed on the part of the appliance connected to the supply mains		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
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
21.B.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-31, the number of falls being:		--
	- 100, if the mass of the part does not exceed 250 g (g).....:		N/A
	- 50, if the mass of the part exceeds 250 g .....:		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts		N/A
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		--
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
	Test conditions as specified		N/A
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		--
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		--
7	Severities		--
	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
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N/A
11	Evaluation of test results		--
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		P
F	ANNEX F (NORMATIVE) CAPACITORS		--
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
1.5	Terms and definitions		--
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A
1.6	Marking		--
	Items a) and b) are applicable		N/A
3.4	Approval testing		--
3.4.3.2	Table 3 is applicable as described		N/A
4.1	Visual examination and check of dimensions		--
	This subclause is applicable		N/A
4.2	Electrical tests		--
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A
4.2.5.2	Only table 11 is applicable		N/A
	Values for test A apply		N/A
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		--
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		--
	This subclause is applicable		N/A
4.14	Endurance		--
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 are applicable		N/A
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	No visible damage		N/A
4.17	Passive flammability test		--
	This subclause is applicable		N/A
4.18	Active flammability test		--
	This subclause is applicable		N/A
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		--
	The following modifications to this standard are applicable for safety isolating transformers:		N/A
7	Marking and instructions		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
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
H	ANNEX H (NORMATIVE) SWITCHES		--
	Switches comply with the following clauses of IEC 61058-1, as modified below:		--
	The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N/A
	Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		--
	Switches are not required to be marked		N/A
	However, a switch that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		--
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		--
15.1	Not applicable		N/A
15.2	Not applicable		N/A

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		--
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles declared according to 7.1.4 is 10 000, unless		N/A
	otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335..... :		N/A
	Switches for operation under no load and which can be operated only by a tool, and		N/A
	switches operated by hand that are interlocked so that they cannot be operated under load,		N/A
	are not subjected to the tests		N/A
	However, switches without this interlock are subjected to the test of 17.2.4.4 for 100 cycles of operation		N/A
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of clause 11 in IEC 60335-1		N/A
	The temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1 (K)..... :		N/A
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		--
	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
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		--
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		N/A
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		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	This subclause is not applicable		N/A
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		--
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		--
	Information for the determination of clearances and creepage distances		P
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		--
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		--
	The microenvironment determines the effect of pollution on the insulation, taking into account the macroenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		--
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N/A
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N/A
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		P
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		--
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		--
7	Test apparatus		--
7.3	Test solutions		--
	Test solution A is used		P
10	Determination of proof tracking index (PTI)		--
10.1	Procedure		--
	The proof voltage is 100 V, 175 V, 400 V or 600 V ..... :	175 V	P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25 V, the number of drops increased to 100		N/A
10.2	Report		--
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF clause 30		--
	Description of tests for determination of resistance to heat and fire		P
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		--
	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		--

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
	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
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A
15.3	The value of t is 37 °C		N/A
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):		N/A
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		N/A
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		--
	Description of tests for appliances incorporating electronic circuits		--
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		--
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex		N/A
R.1	Programmable electronic circuits using software		--
	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

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IEC 60335-2-40			
Clause	Requirement + Test	Result - Remark	Verdict
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:		--
	- single channel with periodic self-test and monitoring		N/A
	- dual channel (homogenous) with comparison		N/A
	- dual channel (diverse) with comparison		N/A
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 have one of the following structures:		--
	- single channel with functional test		N/A
	- single channel with periodic self-test		N/A
	- dual channel without comparison		N/A
R.2.2	Measures to control faults/errors		--
R.2.2.1	When redundant memory with comparison is provided on two areas of the same component, the data in one area is stored in a different format from that in the other area		N/A
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison		N/A
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths		N/A
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate		N/A
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

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

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Clause	Requirement + Test	Result - Remark	Verdict

R.3.2.3.3	Coded software is validated against the module specification by static analysis		N/A
	The module specification is validated against the architecture specification by static analysis		N/A
R.3.3.3	Software validation		--
	The software is validated with reference to the requirements of the software safety requirements specification		N/A
	Compliance is checked by simulation of:		--
	- input signals present during normal operation		N/A
	- anticipated occurrences		N/A
	- undesired conditions requiring system action		N/A

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 1.1 Registers	Stuck at	Functional test, or periodic self-test using either: - static memory test, or - word protection with single bit redundancy	H.2.16.5 H.2.16.6 H.2.19.6 H.2.19.8.2			N/A
1.2 VOID						--
1.3 Programme counter	Stuck at	Functional test, or Periodic self-test, or Independent time-slot monitoring, or Logical monitoring of the programme sequence	H.2.16.5 H.2.16.6 H.2.18.10.4 H.2.18.10.2			N/A
2 Interrupt handling and execution	No interrupt or too frequent interrupt	Functional test, or time-slot monitoring	H.2.16.5 H.2.18.10.4			N/A
3 Clock	Wrong frequency (for quartz synchronized clock: harmonics/ sub-harmonics only)	Frequency monitoring, or time slot monitoring	H.2.18.10.1 H.2.18.10.4			N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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						--
6.2 VOID						--
6.3 Timing	Wrong point in time	Time-slot monitoring, or scheduled transmission Time-slot and logical monitoring, or comparison of redundant communication channels by either: - reciprocal comparison - independent hardware comparator	H.2.18.10.4 H.2.18.18 H.2.18.10.3 H.2.18.15 H.2.18.3			N/A
	Wrong sequence	Logical monitoring, or time-slot monitoring, or Scheduled transmission	H.2.18.10.2 H.2.18.10.4 H.2.18.18			

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Clause	Requirement + Test	Result - Remark	Verdict

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 7.2.1 A/D and D/A-converter	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			N/A
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

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.

AA	**ANNEX AA (INFORMATIVE) (IEC 60335-2-40)** **EXAMPLES FOR OPERATING TEMPERATURES OF THE APPLIANCE**	**--**

BB	**ANNEX BB (NORMATIVE) (IEC 60335-2-40)** **SELECTED INFORMATION ABOUT REFRIGERANTS**	**--**

CC	**ANNEX CC (INFORMATIVE) (IEC/EN 60335-2-40/A1)** **TRANSPORTATION, MARKING AND STORAGE FOR UNITS THAT EMPLOY FLAMMABLE REFRIGERANTS**		**--**
CC.1	Transport of equipment containing flammable refrigerants (IEC 60335-2-40/A1)		N/A
CC.2	Marking of equipment using signs (IEC 60335-2-40/A1)		N/A
CC.3	Disposal of equipment using flammable refrigerants (IEC 60335-2-40/A1)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
CC.4	Storage of equipment/appliances (IEC 60335-2-40/A1)		N/A
CC.5	Storage of packed (unsold) equipment (IEC 60335-2-40/A1)		N/A
DD	**ANNEX DD (NORMATIVE) (IEC/EN 60335-2-40/A1) SERVICE OPERATIONS**		--
DD.1	Generals (IEC 60335-2-40/A1)		N/A
DD.2	Symbols (IEC 60335-2-40/A1)		N/A
DD.3	Information in manual (IEC 60335-2-40/A1 corr.1)		N/A
DD.4	Information on servicing (IEC 60335-2-40/A1)		N/A
DD.5	Repairs to sealed components (IEC 60335-2-40/A1)		N/A
DD.6	Repair to intrinsically safe components (IEC 60335-2-40/A1)		N/A
DD.7	Cabling (IEC 60335-2-40/A1)		N/A
DD.8	Detection of flammable refrigerants (IEC 60335-2-40/A1)		N/A
DD.9	Leak detection methods (IEC 60335-2-40/A1)		N/A
DD.10	Removal and evacuation (IEC 60335-2-40/A1)		N/A
DD.11	Charging procedures (IEC 60335-2-40/A1)		N/A
DD.12	Decommissioning (IEC 60335-2-40/A1)		N/A
DD.13	Labelling (IEC 60335-2-40/A1)		N/A
DD.14	Recovery (IEC 60335-2-40/A1)		N/A
EE	**ANNEX EE (NORMATIVE) (IEC/EN 60335-2-40/A1) PRESSURE TESTS**		--
EE.1	General (IEC 60335-2-40/A1)		P
EE.2	Pressure test value determined under testing carried out in clause 11 (IEC 60335-2-40/A1)		P
EE.3	Pressure test value determined under testing carried out in clause 19 (IEC 60335-2-40/A1)		P
EE.4	Pressure test value determined under testing carried out under standstill conditions (IEC 60335-2-40/A1)		P
EE.5	Fatigue test option for Clauses EE.1 and EE.4.1 (IEC 60335-2-40/A1)		N/A

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

FF	**ANNEX FF (NORMATIVE) (IEC/EN 60335-2-40/A1) LEAK SIMULATION TESTS**		**--**
FF.1	General (IEC 60335-2-40/A1)		N/A
FF.2	Test methods (IEC 60335-2-40/A1 corr.1)		N/A

GG	**ANNEX GG (NORMATIVE) (IEC/EN 60335-2-40/A1) CHARGE LIMITS, VENTILATION REQUIREMENTS AND REQUIREMENTS FOR SECONDARY CIRCUITS**		**--**
GG.1	Requirements for charge limits in ventilated areas (IEC 60335-2-40/A1 Corr.1)		N/A
GG.2	Requirements for charge limits in unventilated areas (IEC 60335-2-40/A1 Corr.1)		N/A
GG.3	Requirements for charge limits in areas with mechanical ventilation (IEC 60335-2-40/A1)		N/A
GG.4	Requirements for mechanical ventilation within the appliance enclosure (IEC 60335-2-40/A1)		N/A
GG.5	Requirements for mechanical ventilation for rooms complying with ISO 5149 (IEC 60335-2-40/A1)		N/A
GG.6	Requirements for refrigeration systems employing secondary heat exchangers (IEC 60335-2-40/A1 Corr.1)		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/A1)		N/A

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

10.1	TABLE: Power input deviation				P
Input deviation of/at: 230V~	P rated (W)	P measured (W)	Δ P	Required Δ P	Remark(Measure current(A))
PD10-SBE(Compressor: FE140Y-E)	250	257,2	+2,8%	+20%	1,26
PD10-SYE(Compressor: FE140Y-E)	250	195,0	-22,0%	+20%	1,19
PD10-SYR(Compressor: NS36HAEG)	250	201,2	-19,6%	+20%	1,14
PD10-SAR(Compressor: FE140Y-E)	250	208,1	-16,8%	+20%	1,11
PD10-SAR(Compressor: NS36HAEG)	250	197,8	-20,9%	+20%	1,05
PD10-SAE(Compressor: FE140Y-E)	250	211,9	-15,2%	+20%	1,21
PD12-SBE(Compressor: FE140Y-E)	260	238,0	-8,5%	+20%	1,18
PD12-SYE(Compressor: FE140Y-E)	260	202,6	-22,1%	+20%	1,13
PD12-SYR(Compressor: NS36HAEG)	260	201,0	-22,7%	+20%	1,14
PD12-SAR(Compressor: FE140Y-E)	260	222,2	-14,5%	+20%	1,20
PD12-SAR(Compressor: NS36HAEG)	260	225,4	-13,3%	+20%	1,25
PD12-SAE(Compressor: FE140Y-E)	260	228,9	-12,0%	+20%	1,30
PD12-SBE(Compressor: FE140Y-E)	260	190,4	-26,8%	+20%	1,11
PD16-SBE(Compressor: FH250Y2-E)	410	350,5	-14,6%	+15%	1,80
PD16-SYR(Compressor: FH210Y-E)	410	343,4	-16,2%	+15%	1,83
PD16-SAR(Compressor: FH210Y-E)	410	351,9	-14,2%	+15%	1,93
PD16-SYE(compressor: FH210Y-E)	410	310,5	-24,3%	+15%	1,50
PD19-SYE(compressor: FH250Y-E)	410	400,5	-2,3%	+15%	2,00
PD20-SBE(Compressor: FH300Y2-E with capacitor 4,0μF)	480	470,6	-2,1%	+15%	2,42

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Clause	Requirement + Test	Result - Remark	Verdict

PD20-SYE(Compressor: FH300Y2-E with capacitor 4,0μF)	480	456,0	-5,0%	+15%	2,36
PD20-SAE(Compressor: FH300Y2-E with capacitor 4,0μF)	480	446,2	-7,0%	+15%	2,46
PD25-SYE(Compressor: EH370Y2-E)	500	476,6	-4,7%	+15%	2,50
PD25-SYR(Compressor: EH370Y2-E)	500	476,6	-4,8%	+15%	2,46
PD20-SAE(alternative fan motor MD60-3)	480	449,0	-6,5%	+15%	2,22
PD10-IAR(alternative compressor: FH170M-E)	250	195,8	-21,7%	+15%	1,14
PD12-SAE(alternative compressor: FH170M-E)	260	205,9	-20,8%	+15%	1,17
PD20-IBR(compressor: FH300Y2-E with capacitor 4,0μF)	480	401,7	-10,1%	+15%	2,06
PD20-IBR(compressor: FH300Y2-E with capacitor 8,0μF)	480	361,0	-24,8%	+15%	1,77
PD20-IBRH(compressor: FH300Y2-E with capacitor 8,0μF)	390	361,0	-7,4%	+15%	1,77
Supplementary information:--					

10,2	**TABLE: Current deviation**				N/A
Current deviation of/at: 230V~	I rated (A)	I measured (A)	Δ I	Required Δ I	Remark
--					

11.8	**TABLE: Heating test (Dehumidifying mode)**		P
	Test voltage (V) ..... :	254,4V~ and 206,8V~	—
	Ambient (°C)..... :	35/24(DB/WB)	—

Thermocouple locations	Max. temperature measured, T (°C)	Max. temperature limit, T (°C)
PD12-SBE(compressor: FE140Y-E)		
Power cord	43,0	75
Fan motor enclosure	51,6	For Ref.
Fan motor capacitor	37,3	70

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Clause	Requirement + Test	Result - Remark	Verdict

Internal wire to compressor	44,7	105
Compressor housing (top)	88,9	For Ref.
Compressor housing(side)	87,9	For Ref.
Ambient for PTC starting relay	96,1	For Ref.
PCB	49,0	145
X2 capacitor (0,1uF) on PCB	41,0	100
X2 capacitor (1,5uF) on PCB	43,0	100
R2 on PCB	72,6	For Ref.
Ambient for compressor relay	37,3	70
Ambient for fan motor relay	37,0	70
Air outlet	41,6	90
Ambient for micro switch	44,8	85
PD16-SBE(compressor: FH250Y2-E)		
Power cord	44,9	75
Fan motor enclosure	68,2	For Ref.
Fan motor capacitor	42,9	70
Internal wire to compressor	51,6	105
Compressor housing(side)	90,0	For Ref.
Compressor housing (top)	88,9	For Ref.
Ambient for PTC starting relay	97,9	For Ref.
PCB	39,2	145
X2 capacitor (0,1uF) on PCB	45,2	100
X2 capacitor (1,5uF) on PCB	50,0	100
R2 on PCB	96,1	For Ref.
Ambient for compressor relay	40,8	70
Ambient for fan motor relay	37,3	70
Air outlet	50,2	90
Ambient for micro switch	52,0	85
PD16-SYE(with compressor: FH210Y-E)		
Power supply cord	48,6	75
Enclosure of appliance	47,7	85
Fan motor enclosure	84,6	For reference
Internal wire to compressor	62,4	105
Compressor enclosure top	86,6	For reference
Compressor enclosure side	88,2	For reference
Capacitor for compressor	52,4	70

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PCB of controller	54,5	145
X2 capacitor	55,8	100
Relay I ambient	60,6	70
Relay II ambient	61,5	70
Transformer winding	72,7	105
Micro switch ambient	51,9	85
Air outlet	55,4	90
Varistor	56,3	85
Capacitor for fan motor	52,2	70
PD19-SYE(with compressor: FH250Y-E)		
Power supply cord	48,7	75
Enclosure of appliance	47,8	85
Fan motor enclosure	84,1	For reference
Internal wire to compressor	62,1	105
Compressor enclosure top	86,4	For reference
Compressor enclosure side	89,2	For reference
Capacitor for compressor	53,4	70
PCB of controller	54,1	145
X2 capacitor	56,2	100
Relay I ambient	65,2	70
Relay II ambient	64,5	70
Transformer winding	72,7	105
Micro switch ambient	55,2	85
Air outlet	60,4	90
Varistor	58,1	85
Capacitor for fan motor	53,2	70
PD20-SBE(compressor: FH300Y2-E)		
Power cord	40,7	75
Fan motor enclosure	73,6	For Ref.
Fan motor capacitor	41,1	70
Internal wire to compressor	40,0	105
Compressor housing(side)	88,4	For Ref.
Compressor housing (top)	84,4	For Ref.
Ambient for PTC starting relay	94,4	For Ref.
PCB	48,9	145
X2 capacitor (0,1uF) on PCB	45,6	100
X2 capacitor (1,5uF) on PCB	44,8	100
R2 on PCB	91,3	For Ref.

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Clause	Requirement + Test	Result - Remark	Verdict

Ambient for compressor relay	39,2	70
Ambient for fan motor relay	39,0	70
Air outlet	52,2	90
Ambient for micro switch	47,0	85
PD12-SYE(compressor: FE140Y-E)		
Power cord	43,9	75
Fan motor enclosure	68,7	For Ref.
Winding of transformer	62,1	105
Fan motor capacitor	42,1	70
Internal wire to compressor	46,1	105
Compressor housing (top)	72,0	For Ref.
Compressor housing(side)	74,0	For Ref.
Ambient for PTC starting relay	90,1	For Ref.
PCB	45,5	145
X2 capacitor on PCB	46,0	100
Ambient for compressor relay	44,7	70
Ambient for fan motor relay	48,0	70
Air outlet	39,4	90
Enclosure	41,4	85
Ambient for micro switch	39,1	85
PD16-SYR(compressor: FH250Y2-E)		
Power cord	49,2	75
Fan motor enclosure	76,0	For Ref.
Fan motor capacitor	43,4	70
Internal wire to compressor	53,2	105
Compressor housing (top)	68,3	For Ref.
Compressor housing(side)	74,7	For Ref.
PCB	52,5	145
X2 capacitor on PCB	52,3	100
Ambient for compressor relay	49,2	70
Air outlet	43,7	90
Enclosure	45,8	85
Humidistat	47,0	75
PD25-SYE(Compressor: EH370Y2-E)		
Power cord	51,0	75
Fan motor enclosure	88,2	For Ref.

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Clause	Requirement + Test	Result - Remark	Verdict

Winding of transformer	66,0	105
Fan motor capacitor	51,2	70
Internal wire to compressor	57,4	105
Compressor housing (top)	93,4	For Ref.
Compressor housing(side)	91,1	For Ref.
Ambient for PTC starting relay	97,4	For Ref.
PCB	53,6	145
X2 capacitor on PCB	48,9	100
Ambient for compressor relay	50,9	70
Ambient for fan motor relay	59,0	70
Air outlet	48,5	90
Enclosure	52,3	85
Ambient for micro switch	41,6	85
PD12-SYR(compressor: NS36HAEG)		
Power cord	40,1	75
Fan motor enclosure	57,4	For Ref.
Fan motor capacitor	37,5	70
Internal wire to compressor	40,7	105
Compressor housing (top)	58,2	For Ref.
Compressor housing(side)	55,6	For Ref.
PCB	41,7	145
X2 capacitor on PCB	46,0	100
Ambient for compressor relay	41,2	70
Air outlet	40,5	90
Enclosure	40,4	85
Ambient for humidity switch	37,2	55
PD25-SYE(compressor: NS36HAEG)		
Power cord	43,4	75
Winding of transformer	66,2	105
Fan motor enclosure	77,2	For Ref.
Ambient for fan motor relay	55,0	70
Fan motor capacitor	52,8	70
Internal wire to compressor	47,7	105
Compressor housing (top)	54,7	For Ref.
Compressor housing(side)	89,4	For Ref.
PCB	42,4	145

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Clause	Requirement + Test	Result - Remark	Verdict

X2 capacitor on PCB	48,0	100
Ambient for compressor relay	58,9	70
Air outlet	53,3	90
Terminal block	52,1	For Cl.30
Enclosure	41,7	85
Ambient for micro switch	46,1	85
PD20-SAE(Compressor: FH300Y2-E)		
Enclosure of fan motor	66,9	For Ref.
Ambient for fan motor relay	62,0	70
Ambient for compressor relay	60,6	70
Capacitor for fan motor	52,7	70
Control PCB	55,7	145
Winding of transformer	44,6	105
Power supply cord	56,3	75
Top enclosure of compressor	92,7	For Ref.
Side enclosure of compressor	60,6	For Ref.
Ambient for compressor starting relay	103,6	For Ref.
Ambient for micro switch	53,1	85
X2 capacitor	64,4	100
Display PCB	46,3	145
Air outlet	49,8	90
Enclosure	48,1	85
PD16-SAR(compressor: FH210Y-E)		
Fan motor enclosure	78,2	For Ref.
Transformer	45,1	105
Ambient for fan motor relay	53,8	70
Ambient for compressor relay	47,9	70
Capacitor for fan motor	53,6	70
PCB	52,4	145
Power cord	49,5	75
Compressor housing (top)	69,2	For Ref.
Compressor housing(side)	73,1	For Ref.
Internal wire to compressor	54,4	105
Capacitor for compressor	55,1	70
Ambient for micro switch	42,2	85
Terminal block	48,4	For clause 30.1

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Clause	Requirement + Test	Result - Remark	Verdict

X2 capacitor	52,7	100
Air outlet	43,9	90
Appliance enclosure	43,1	85
PD10-SAE(compressor: NS36HAEG)		
Enclosure of fan motor	69,4	For ref.
Ambient for fan motor relay	42,0	70
Ambient for compressor relay	41,8	70
Control PCB	41,1	145
Power supply cord	40,1	75
Top enclosure of compressor	54,9	For ref.
Side enclosure of compressor	56,1	For ref.
Internal wire for compressor	42,4	105
Air outlet	42,8	90
PD12-SAE(compressor: NS36HAEG)		
Enclosure of fan motor	60,0	For ref.
Ambient for fan motor relay	44,9	70
Ambient for compressor relay	47,5	70
Control PCB	43,4	145
Power supply cord	40,4	75
Top enclosure of compressor	63,3	For ref.
Side enclosure of compressor	61,8	For ref.
Internal wire for compressor	44,5	105
Air outlet	43,8	90
PD12-SBE(compressor: NS36HAEG)		
Power cord	39,4	75
Fan motor enclosure	50,7	For Ref.
Fan motor capacitor	43,1	70
Internal wire to compressor	43,1	105
Compressor housing (top)	62,2	For Ref.
Compressor housing(side)	61,4	For Ref.
Ambient for PTC starting relay	48,6	70
PCB	48,6	145
X2 capacitor (0,1uF) on PCB	43,1	100
X2 capacitor (1,5uF) on PCB	44,9	100
R2 on PCB	51,2	For Ref.
Ambient for compressor relay	44,8	70

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Clause	Requirement + Test	Result - Remark	Verdict

Ambient for fan motor relay	42,0	70
Air outlet	40,1	90
Ambient for micro switch	42,3	85
PD16-SAR (compressor: FH210Y-E)		
Fan motor enclosure	76,0	For Ref.
Transformer	43,4	105
Ambient for fan motor relay	55,3	70
Ambient for compressor relay	49,2	70
Capacitor for fan motor	52,4	70
PCB	52,2	145
Power cord	49,3	75
Compressor housing (top)	68,3	For Ref.
Compressor housing(side)	74,7	For Ref.
Internal wire to compressor	53,2	105
Capacitor for compressor	57,4	70
Ambient for micro switch	41,6	85
Terminal block	47,4	For clause 30.1
X2 capacitor	52,3	100
Air outlet	43,7	90
Appliance enclosure	43,8	85
PD19-SAE (compressor: FH250Y2-E)		
Fan motor enclosure	88,2	For Ref.
Transformer	66,0	105
Ambient for fan motor relay	59,0	70
Ambient for compressor relay	50,9	70
Capacitor for fan motor	51,2	70
PCB	53,6	145
Power cord	51,0	75
Compressor housing (top)	93,4	For Ref.
Compressor housing(side)	91,1	For Ref.
Internal wire to compressor	57,4	105
Capacitor for compressor	57,4	70
Ambient for micro switch	41,6	85
Terminal block	47,4	For clause 30.1
X2 capacitor	48,9	100

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Clause	Requirement + Test	Result - Remark	Verdict

Air outlet	48,5	90
Appliance enclosure	52,3	85
PD25-SYR(Humidity switch H4600D or H4600E, defrost PCB controller 800088(3))		
Power cord	45,4	75
Fan motor enclosure	74,5	For Ref.
Fan motor capacitor	42,0	70
Internal wire to compressor	49,5	105
Compressor housing (top)	83,5	For Ref.
Compressor housing(side)	87,7	For Ref.
PCB	58,1	145
X2 capacitor on PCB	61,1	100
Compressor relay(ambient)	61,8	70
Air outlet	56,2	90
Enclosure	48,5	85
Humidity switch(ambient)	43,1	For clause 30
PD20-SAE (Alternative fan motor MD60-3)		
Fan motor enclosure(MD60-3:Lian Da)	60,3	For reference
Fan motor enclosure(Alternative: MD60-3:Kaibang)	60,3	For reference
Compressor enclosure (top)	54,0	For reference
Compressor enclosure (side)	54,3	For reference
Appliance enclosure	43,6	85
Fan motor capacitor	42,8	70
Compressor capacitor	42,9	85
Fan motor relay ambient	45,9	70
Main PCB	51,6	145
Air outlet	46,0	90
Power supply cord	40,6	75
Transformer	63.9	105
X2 capacitor	48,8	85
PD10-IAR (Compressor: FH170M-E)		
Fan motor enclosure(MD70-3-1)	54,5	For reference
Humidity switch(ambient)	40,7	For clause 30
Display PCB	41,3	145
Compressor enclosure (top)	51,1	For reference

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Clause	Requirement + Test	Result - Remark	Verdict

Compressor enclosure (side)	42,3	For reference
Appliance enclosure	38,1	85
Internal wire to compressor	38,8	105
Compressor relay ambient	43,4	70
Terminal block	37,4	For clause 30.1
Main PCB	45,1	145
Air outlet	41,6	90
Power supply cord	38,6	75
Ambient for micro switch	38,1	85
X2 capacitor	45,8	85
PD12-SAE (Compressor: FH170M-E)		
Fan motor enclosure(MD60-3:Lian Da)	57,6	For reference
Winding of transformer	52,8	105
Fan motor relay ambient	40,4	70
Compressor relay ambient	43,6	70
Display PCB	39,9	145
Compressor enclosure (top)	55,9	For reference
Compressor enclosure (side)	51,9	For reference
Appliance enclosure	38,9	85
Internal wire to compressor	41,5	105
Main PCB	45,1	145
Air outlet	41,6	90
Power supply cord	38,6	75
X2 capacitor	45,8	85
Ambient for micro switch	38,1	85
PD20-IBR (Compressor: FH300Y2-E with capacitor 4,0μF)		
Fan motor enclosure((MD60-3:Lian Da)	74,7	For reference
Humidity switch(ambient)	38,5	For clause 30
Display PCB	40,0	145
Compressor enclosure (top)	72,8	For reference
Compressor enclosure (side)	76,9	For reference
Appliance enclosure	47,4	85
Internal wire to compressor	51,9	105
Compressor relay ambient	56,4	70
Terminal block	44,9	For clause 30.1

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Clause	Requirement + Test	Result - Remark	Verdict

Main PCB	50,6	145
Air outlet	50,7	90
Power supply cord	43,9	75
Ambient for micro switch	45,1	85
X2 capacitor	50,0	85
Capacitor of compressor	45,6	85
Capacitor of fan motor	43,1	70
PD20-IBR (compressor: FH300Y2-E with capacitor 8.0μF)		
Fan motor enclosure(MD60-3:Lian Da)	69,4	For reference
Humidity switch(ambient)	36,5	For clause 30
Display PCB	39,9	145
Compressor enclosure (top)	44,6	For reference
Compressor enclosure (side)	47,8	For reference
Appliance enclosure	43,5	85
Internal wire to compressor	42,2	105
Compressor relay ambient	40,9	70
Terminal block	39,1	For clause 30.1
Main PCB	43,4	145
Air outlet	47,6	90
Power supply cord	38,0	75
Ambient for micro switch	41,6	85
X2 capacitor	44,2	85
Capacitor of compressor	43,1	85
Capacitor of fan motor	43,0	70
Supplementary information: The tests were carried out at both 254,4 V and 206,8 V. The highest temperatures were considered.		

11.8	**TABLE: Heating test, resistance method (Dehumidifying mode)**					P
	Test voltage (V) .....:			254,4V~ and 206,8V~		—
	Ambient, t1 (°C) .....:			35/24(DB/WB)		—
	Ambient, t2 (°C) .....:			35/24(DB/WB)		—
Temperature rise of winding	R1 (Ω)	R2 (Ω)	T (°C)	Max. T (°C)	Insulation class	
PD20-SBE(compressor: FH300Y2-E)						
Main winding of fan motor	965,0(20°C)	1268,0	99,9	120	B	
Aux, winding of fan motor	1116,0(20°C)	1452,0	96,6	120	B	

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IEC 60335-2-40					
Clause	Requirement + Test		Result - Remark		Verdict
PD12-SYE(compressor: FE140Y-E)					
Primary winding of transformer	1438,0(30°C)	1659,0	70,6	115	E
Secondary winding of transformer	4,80(30°C)	5,50	68,6	115	E
Main winding of fan motor	981,0(30°C)	1238,0	99,3	120	B
Aux, winding of fan motor	1251,0(30°C)	1586,0	100,8	120	B
PD16-SYR(compressor: FH250Y2-E)					
Main winding of fan motor	1013,0(30°C)	1290,0	102,3	120	B
Aux, winding of fan motor	1230,0(30°C)	1572,0	103,5	120	B
PD25-SYE(compressor: FH300Y2-E)					
Primary winding of transformer	1484,0(30°C)	1658,0	61,0	115	E
Secondary winding of transformer	4,30(30°C)	4,90	66,9	115	E
Main winding of fan motor	1005,0(30°C)	1280,0	102,4	120	B
Aux, winding of fan motor	1244,0(30°C)	1594,0	104,4	120	B
PD12-SYR(compressor: NS36HAEG)					
Main winding of fan motor	1022,0(30°C)	1236,0	85,4	120	B
Aux, winding of fan motor	1191,0(30°C)	1444,0	86,2	120	B
PD25-SYE(compressor: NS36HAEG)					
Primary winding of transformer	1500,0(33°C)	1716,0	71,5	115	E
Secondary winding of transformer	4,30(33°C)	5,00	76,5	115	E
Main winding of fan motor	508,0(33°C)	653,0	109,4	120	B
Aux, winding of fan motor	214,0(33°C)	269,0	101,8	120	B
PD20-SAE(compressor: FH300Y2-E)					
Primary winding of transformer	1462,0(25°C)	1793,0	83,8	115	E
Main winding of fan motor	501,0(25°C)	635,0	94,4	120	B
Aux, winding of fan motor	212,0(25°C)	271,0	97,2	120	B
PD12-SBE(compressor: NS36HAEG)					
Main winding of fan motor	210,0(27°C)	251,0	78,0	120	B
PD16-SAR (compressor: FH210Y-E)					
Main winding of fan motor	1013,0(30°C)	1224,0	85,0	120	B
Auxiliary winding of fan motor	1230,0(30°C)	1487,0	85,3	120	B
PD19-SAE (compressor: FH250Y2-E)					
Main winding of fan motor	600,0(30°C)	760,0	102,4	120	B
Auxiliary winding of fan motor	580,0(30°C)	736,0	104,4	120	B
PD20-SAE (Alternative fan motor MD60-3)					
Main winding of fan motor (MD60-	851,3(30,5°C)	1041,2	89,6	120	B

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Clause	Requirement + Test	Result - Remark	Verdict

3:Lianda)					
Auxiliary winding of fan motor (MD60-3:Lianda)	855,9(30,5°C)	1049,8	90,5	120	B
Main winding of fan motor (MD60-3:Kaibang)	851,3(30,5°C)	1041,2	89,6	120	B
Auxiliary winding of fan motor (MD60-3:Kaibang)	855,9(30,5°C)	1049,8	90,5	120	B
PD10-IAR (Compressor: FH170M-E)					
Winding of fan motor (MD70-3-1:Lianda)	216,3(35°C)	246,1	72,1	120	B
PD12-SAE (Compressor: FH170M-E)					
Winding of fan motor (MD70-3-1:Lianda)	215,8(35°C)	247,3	74,3	120	B
PD20-IBR (Compressor: FH300Y2-E with capacitor 4,0μF)					
Main winding of fan motor (MD60-3:Lianda)	864,1(35°C)	1051,4	93,4	120	B
Auxiliary winding of fan motor (MD60-3:Lianda)	871,3(35°C)	1058,7	93,0	120	B
PD20-IBR (compressor: FH300Y2-E with capacitor 8.0μF)					
Main winding of fan motor (MD60-3:Lianda)	859,2(33°C)	1057,8	94,8	120	B
Auxiliary winding of fan motor (MD60-3:Lianda)	864,4(33°C)	1066,1	95,4	120	B
Supplementary information: The tests were carried out at both 254,4 V and 206,8 V. The highest temperatures were considered.					

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)..... :	254,4V	—

Leakage current between	I (mA)	Max. allowed I (mA)
PD12-SBE(compressor: FE140Y-E)		
L/N – earthing metal parts	0,280	0,75
L/N – plastic enclosure	0,030	0,35 peak
PD16-SBE(compressor: FH250Y2-E)		
L/N – earthing metal parts	0,320	0,75
L/N – plastic enclosure	0,025	0,35 peak
PD20-SBE(compressor: FH300Y2-E)		
L/N – earthing metal parts	0,300	0,75
L/N – plastic enclosure	0,020	0,35 peak

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Clause	Requirement + Test	Result - Remark	Verdict

PD12-SYE(compressor: NS36HAEG)		
L/N – earthing metal parts	0,340	0,75
L/N – plastic enclosure	0,030	0,35 peak
PD16-SYR(compressor: NS36HAEG)		
L/N – earthing metal parts	0,290	0,75
L/N – plastic enclosure	0,065	0,35 peak
PD25-SYE(compressor: EH370Y2-E)		
L/N – earthing metal parts	0,230	0,75
L/N – plastic enclosure	0,035	0,35 peak
PD12-SYR(compressor: FE140Y-E)		
L/N – earthing metal parts	0,310	0,75
L/N – plastic enclosure	0,065	0,35 peak
PD25-SYE(compressor: EH370Y2-E)		
L/N – earthing metal parts	0,360	0,75
L/N – plastic enclosure	0,050	0,35 peak
PD20-SAE(compressor: FH300Y2-E)		
L/N – earthing metal parts	0,250	0,75
L/N – plastic enclosure	0,035	0,35 peak
PD10-SAE(compressor: FE140Y-E)		
L/N – earthing metal parts	0,120	0,75
L/N – plastic enclosure	0,035	0,35 peak
PD12-SAE(compressor: FE140Y-E)		
L/N – earthing metal parts	0,110	0,75
L/N – plastic enclosure	0,035	0,35 peak
PD12-SBE(compressor: NS36HAEG)		
L/N – earthing metal parts	0,280	0,75
L/N – plastic enclosure	0,030	0,35 peak
PD16-SAR (compressor: FH210Y-E)		
L/N – earthing metal parts	0,280	0,75
L/N – plastic enclosure	0,030	0,35 peak
PD19-SAE (compressor: FH250Y2-E)		
L/N – earthing metal parts	0,223	0,75
L/N – plastic enclosure	0,032	0,35 peak
PD16-SYE(with compressor: FH210Y-E)		
L/N – earthing metal parts	0,270	0,75

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Clause	Requirement + Test	Result - Remark	Verdict

L/N – plastic enclosure	0,060	0,35 peak
PD19-SYE(with compressor: FH250Y-E)		
L/N – earthing metal parts	0,255	0,75
L/N – plastic enclosure	0,043	0,35 peak
PD20-SAE(Alternative fan motor MD60-3)		
L/N – earthing metal parts	0,410	0,75
L/N – plastic enclosure	0,010	0,35 peak
PD10-IAR (Compressor: FH170M-E)		
L/N – earthing metal parts	0,400	0,75
L/N – plastic enclosure	0,020	0,35 peak
PD12-SAE (Compressor: FH170M-E)		
L/N – earthing metal parts	0,400	0,75
L/N – plastic enclosure	0,020	0,35 peak
PD20-IBR (Compressor: FH300Y2-E)		
L/N – earthing metal parts	0,430	0,75
L/N – plastic enclosure	0,030	0,35 peak
Supplementary information:--		

13.3	**TABLE: Dielectric strength**	P
Test voltage applied between:	Test potential applied (V)	Breakdown / flashover (Yes/No)
For all models		
L/N – earthing metal enclosure	1000	No
L/N – plastic enclosure	3000	No
Supplementary information: the test was performed on all models and only the most severe result is listed.		

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: --					

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Clause	Requirement + Test	Result - Remark	Verdict

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

Leakage current between	I (mA)	Max. allowed I (mA)
PD12-SBE(compressor: FE140Y-E)		
L/N – earthing metal parts	0,310	0,75
L/N – plastic enclosure	0,025	0,25
PD20-SBE(compressor: FH300Y2-E)		
L/N – earthing metal parts	0,310	0,75
L/N – plastic enclosure	0,025	0,25
PD12-SYE(compressor: NS36HAEG)		
L/N – earthing metal parts	0,380	0,75
L/N – plastic enclosure	0,045	0,25
PD16-SYR(compressor: FH250Y2-E)		
L/N – earthing metal parts	0,380	0,75
L/N – plastic enclosure	0,085	0,25
PD25-SYE(compressor: EH370Y2-E)		
L/N – earthing metal parts	0,250	0,75
L/N – plastic enclosure	0,045	0,25
PD20-SAE(compressor: FH300Y2-E)		
L/N – earthing metal parts	0,285	0,75
L/N – plastic enclosure	0,040	0,25
PD20-SAE(Alternative fan motor MD60-3)		
L/N – earthing metal enclosure	0,400	0,75
L/N – plastic enclosure	0,010	0,25
PD10-IAR (Compressor: FH170M-E)		
L/N – earthing metal enclosure	0,460	0,75
L/N – plastic enclosure	0,050	0,25
PD12-SAE (Compressor: FH170M-E)		
L/N – earthing metal enclosure	0,450	0,75
L/N – plastic enclosure	0,035	0,25
PD20-IBR (Compressor: FH300Y2-E)		
L/N – earthing metal enclosure	0,300	0,75
L/N – plastic enclosure	0,030	0,25

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Clause	Requirement + Test	Result - Remark	Verdict

16.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
For all models			
L,N – earthing metal enclosure		1250	No
L,N – plastic enclosure		3000	No
Supplementary information: the test was performed on all models and only the most severe result is listed			

17	TABLE: Overload protection		P
Thermocouple locations		Measured temperature(°C)	required temperature(°C)
Winding of transformer(EI-35)		96,2	215
Winding of transformer(A35V1000250)		94,6	215
Supplementary information: --			

19.2	Abnormal operation conditions – locked rotor test other than motor-compressors				P
	Ambient, t1 (°C):		23,0 °C		—
	Ambient, t2 (°C):		23,0 °C		—
	Test voltage (V) :		240V		—
Temperature limit T of winding:	R_1 (Ω)	R_2 (Ω)	Measured T (°C)	Limit T (°C)	Insulation class
Winding of MD61-3 (Lian Da)	--	--	106,0	225	B
Enclosure of MD61-3 (Lian Da)	--	--	103,0	150	--
Winding of MD60-3-2 (Lian Da)	--	--	111,0	225	B
Enclosure of MD60-3-2 (Lian Da)	--	--	101,0	150	--
Winding of MD88-3 (Lian Da)	--	--	115,0	225	B
Enclosure of MD88-3 (Lian Da)	--	--	98,0	150	--
Winding of MD61-3 -1 (Lian Da)	--	--	102,0	225	B
Enclosure of MD61-3 -1 (Lian Da)	--	--	104,0	150	--
Winding of MD60-3 -1 (Lian Da)	--	--	103,0	225	B
Enclosure of MD60-3 -1 (Lian Da)	--	--	100,0	150	--
Winding of MD70-3-1 (Lian Da)	--	--	122,0	225	B
Enclosure of MD70-3-1 (Lian Da)	--	--	106,0	150	--
Winding of MD70-3 (Lian Da)	--	--	115,0	225	B
Enclosure of MD70-3 (Lian Da)	--	--	92,0	150	--

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Clause	Requirement + Test	Result - Remark	Verdict

Winding of MD60-3(KAIBANG)	--	--	134,9	225	B
Enclosure of MD60-3(KAIBANG)	--	--	105,1	150	--
Winding of MD60-3 (Lian Da)	--	--	134,9	225	B
Enclosure of MD60-3 (Lian Da)	--	--	105,1	150	--
Supplementary information:					

19.2	**TABLE: electric strength measurements after 72 hours**		P
Test voltage applied between:		Test voltage (V)	Breakdown Yes / No
Between winding of metal enclosure		1250	No

19.2	**TABLE: leakage current measurements after 72 hours**		P
	A voltage equal to twice the rated voltage (V) :	480 V	—
Leakage current I between :		I (mA)	Required I (mA)
MD61-3 (Lian Da)		0,019	2,0
MD60-3-2 (Lian Da)		0,033	2,0
MD88-3 (Lian Da)		0,024	2,0
MD61-3 -1 (Lian Da)		0,032	2,0
MD60-3 -1 (Lian Da)		0,036	2,0
MD70-3-1 (Lian Da)		0,028	2,0
MD70-3 (Lian Da)		0,044	2,0
MD60-3(KAIBANG)		0,490	2,0
MD60-3 (Lian Da)		0,490	2,0

19.3	**Abnormal operation conditions – Locked rotor test motor-compressor**	N/A
	Motor-compressor.....:	FH300Y2-E
	Start device .....:	--
	Protector.....:	--
	Start capacitor .....:	8,0μF/400V
	Run capacitor .....:	--
	Cooling; (static); (fan-m^3/h); (oil); .....:	static
	Thermal motor-protection system .....:	Self-resetting

	Self-resetting		Manually reset
Rated voltage	Vn max (V)	Vn min (V)	Vn max (V)

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Clause	Requirement + Test	Result - Remark	Verdict

	After 72 h	After 288 h	After 360 h	After 363 h	After 50 cycles
High-voltage test (see 16.3)	P	--	--	--	--
Leakage current (mA) (see 16.2)	--	--	0,11	0,11	--
Electric strength (see 13.3)	--	--	P	P	--
Room temperature (°C) (20 ± 5°C)	--	--	23,5	23,5	--
Number of cycles (≥ 2000 or 50)	--	--	5748	--	--
Housing temperature (°C) (≤ 150°C)	--	--	89,0	89,0	--
supplementary information:--					

19.5-19.9	**Abnormal operation conditions**	P
Subclause	Effect	Verdict
19.5	Refer to table 19.5	P
19.6		N/A
19.7	Refer to table 19.7	P
19.8		N/A
19.9		N/A
Supplementary information: --		

19.5	**TABLE: RESTRICT HEAT EXCHANGERS TEST**		P
	t1 (°C) .....:	23,0	
	t2 (°C) .....:	23,0	
Procedure	Supplied at 240V		
Duration	Until steady conditions are obtained or the protective device operates		

Restrict heat exchanger	phenomenon	hazard
PD10-SBE(compressor: FE140Y-E)		
Restrict heat exchanger	Protection occurred, compressor stopped.	No
Cut off fan motor	Protection occurred, compressor stopped.	No
PD10-SYE(compressor: NS36HAEG)		
Restrict heat exchanger	Operated normally.	No
Cut off fan motor	Protection occurred, compressor stopped.	No
PD12-SBE(compressor: FE140Y-E)		
Restrict heat exchanger	Protection occurred, compressor stopped.	No
Cut off fan motor	Protection occurred, compressor stopped.	No
PD16-SBE(compressor: FH250Y2-E)		
Restrict heat exchanger	Protection occurred, compressor stopped.	No

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Clause	Requirement + Test	Result - Remark	Verdict

Cut off fan motor	Protection occurred, compressor stopped.	No
PD12-SYE(compressor: NS36HAEG)		
Restrict heat exchanger	Operated normally.	No
Cut off fan motor	Protection occurred, compressor stopped.	No
P**D16-SYR(compressor: FH210Y-E)**		
Restrict heat exchanger	Protection occurred, compressor stopped.	No
Cut off fan motor	Protection occurred, compressor stopped.	No
PD16-SYE(with compressor: FH210Y-E)		
Restrict heat exchanger	Protection occurred; compressor stopped.	No
Once steady conditions are attained, disconnected the fan motor	Protection occurred; compressor stopped.	No
PD19-SYE(with compressor: FH250Y-E)		
Restrict heat exchanger	Protection occurred; compressor stopped.	No
Once steady conditions are attained, disconnected the fan motor	Protection occurred; compressor stopped.	No
PD20-SYR(compressor: FH300Y2-E)		
Restrict heat exchanger	Operated normally.	No
Cut off fan motor	Protection occurred, compressor stopped.	No
PD25-SYE(compressor: EH370Y2-E)		
Restrict heat exchanger	Operated normally.	No
Cut off fan motor	Protection occurred, compressor stopped.	No
PD20-SAE (Alternative fan motor MD60-3)		
The programmed controller, stopping in any position	Protection occurred, compressor stopped.	No
Open-circuiting or short-circuiting of components	Protection occurred, compressor stopped.	No
PD10-IAR (Compressor: FH170M-E)		
Restrict heat exchanger	Operated normally.	No
Once steady conditions are attained, disconnected the fan motor	Protection occurred, compressor stopped.	No
PD12-SAE (Compressor: FH170M-E)		
Restrict heat exchanger	Operated normally.	No
Once steady conditions are attained, disconnected the fan motor	Protection occurred, compressor stopped.	No

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Clause	Requirement + Test	Result - Remark	Verdict

19.7	**TABLE: low and high temperature test**		P
Low temperature	t (°C)	0/--(DB/WB)	
High temperature	t (°C)	45/--(DB/WB)	
Procedure	Supplied at 240V		
Duration	Until steady conditions are obtained or the protective device operates		

	phenomenon	hazard
PD10-SBE(compressor: FE140Y-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD10-SYE(compressor: NS36HAEG)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD12-SBE(compressor: FE140Y-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD16-SBE(compressor: FH250Y2-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD12-SYE(compressor: NS36HAEG)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD16-SYR(compressor: FH210Y-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD16-SYE(with compressor: FH210Y-E)		

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Clause	Requirement + Test	Result - Remark	Verdict

Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD19-SYE(with compressor: FH250Y-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD20-SYR(compressor: FH300Y2-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD25-SYE(compressor: EH370Y2-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Protection happened, compressor stopped	No
Dry-bulb temperature increased a value 10 K above the maximum value	Protection happened, compressor stopped	No
PD10-IAR (Compressor: FH170M-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Operated normally.	No
Dry-bulb temperature increased a value 10 K above the maximum value	Operated normally.	No
PD12-SAE (Compressor: FH170M-E)		
Dry-bulb temperature reduced a value 5 K below the minimum value	Operated normally.	No
Dry-bulb temperature increased a value 10 K above the maximum value	Operated normally.	No

19.10	**Abnormal operation conditions**	P
Failure description	Effect	Verdict
The timer, if any, stopping in any position	Protection occurred, compressor stopped	P
Disconnection and reconnection of one or more phases of the supply	Protection occurred, compressor stopped	P
Open-circuiting or short-circuiting of components, like relays, contactors, timers, thermostats, etc	Protection occurred, compressor stopped	P
Supplementary information: --		

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Clause	Requirement + Test	Result - Remark	Verdict

19.11.2	Abnormal Operation			P
Fault condition	Short circuit	Open circuit	Effect	Verdict
ZR1	yes	yes	The appliance was stopped; The appliance was normal operation.	P
C1	yes	yes	The appliance was stopped; The appliance was normal operation.	P
D1	yes	yes	The appliance was stopped; The appliance was normal operation.	P
C2	yes	yes	The appliance was stopped; The appliance was normal operation.	P
R2	yes	yes	The appliance was stopped; The appliance was normal operation.	P
C5	yes	yes	The appliance was stopped; The appliance was normal operation.	P
EC1	yes	yes	The appliance was stopped; The appliance was normal operation.	P
R1	yes	yes	The appliance was stopped; The appliance was normal operation.	P
Q1	yes	yes	The appliance was stopped; The appliance was normal operation.	P
Q2	yes	yes	The appliance was stopped; The appliance was normal operation.	P
U1	yes	yes	The appliance was stopped; The appliance was normal operation.	P
U2	yes	yes	The appliance was stopped; The appliance was normal operation.	P

19.14	TABLE: Abnormal operation, temperature rises	P
Thermocouple locations	T (°C)	Max. T (°C)
Insulation of supply cord	41,1	175
Walls, ceiling and floor of the test casing	35,6	175
Supplementary information: --		

21.1	TABLE: Impact resistance		P
Impacts per surface	Surface tested	Impact energy (Nm)	Comments
3 times	Control panel	0,5 J	No damage
Supplementary information:			

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24.1	TABLE: Critical components information(See CDF)				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1)]
--	--	--	--	--	--
Supplementary information: Refer to CDF [1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

24.5	Voltage across the capacitor		P
	Appliances operated: at 1,1 times rated voltage (V):	264	

Under test capacitor	Tested (V)	Rated (V)	Required (V)
Compressor capacitor	401,0	400	440
Fan motor capacitor	357,0	400	440

28.1	TABLE: Threaded part torque test		P
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Fixed screw (for plastic enclosure)	3,9	II	1,2
Fixed screw (for PCB)	2,9	II	1,2
Fixed screw (for power supply cord cover)	3,9	II	1,2
Screw fixing earthing continuity connections	3,2	II	1,2
Supplementary information: --			

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

Supplementary information:

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

1. The clearance for basic insulation between winding and metal bobbin of fan motors is 3,0 mm;
2. The clearance for function insulation on PCB is 3,2 mm;
3. The clearance for supplementary insulation between internal wire and accessible surface is 4,8 mm
4. The clearance for reinforce insulation between inner live part and accessible surface is 10,0 mm.

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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	3,0	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	—	4,8	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0	—	—	11,0	P
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A

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

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IEC 60335-2-40			
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**	

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

1. The creepage distance for basic insulation between winding and metal bobbin of fan motors is 3,0 mm.
2. The creepage distance for supplementary insulation between internal wire and accessible surface is 4,8mm.
3. The creepage distance for reinforce insulation between inner live part and accessible surface is 11,0 mm.

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

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

Supplementary information:

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

1. The creepage distance for function insulation on PCB is 3,2mm.

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

30	**TABLE: Resistance to heat and fire**																			
Object/ part No.	Manufacturer/ trademark	Type/ model	Ball pressure test °C				Glow wire test (GWT) °C						Glow-wire flammability index (GWFI) °C				Glow-wire ignition temp. (GWIT) °C		Needle - flame test (NFT)	Verdict
			75	125	cl. 11 +40	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								te	ti	te	ti									
Bobbin of transformer	--	--	--	1,4	--	--	--	--	--	7)	7)	√	--	--	--	--	--	--	--	P
Bobbin of fan motor	--	--	--	1,2	--	--	--	--	--	7)	7)	√	--	--	--	--	--	--	--	P
Enclosure	--	--	1,2	--	--	--	√	--	--	--	--	--	--	--	--	--	--	--	--	P
Cord anchorage	--	--	1,5	--	--	--	√	--	--	--	--	--	--	--	--	--	--	--	--	P
Wire connector	--	--	--	1,1	--	--	--	--	--	7)	7)	√	--	--	--	--	--	--	--	P
Relay	--	--	--	--	--	--	--	--	--	7)	7)	√	--	--	--	--	--	--	--	P
X2 capacitor	--	--	--	--	--	--	--	--	--	7)	7)	√	--	--	--	--	--	--	--	P
Humidity switch	--	--	--	1,0	--	--	--	--	--	7)	7)	√	--	--	--	--	--	--	--	P
PCB	--	--	--	--	--	--	--	--	--				--	--	--	--	--	--	√	P

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

30	**TABLE: Resistance to heat and fire**																			
Object/ part No.	Manufacturer/ trademark	Type/ model	Ball pressure test °C				Glow wire test (GWT) °C						Glow-wire flammability index (GWFI) °C				Glow-wire ignition temp. (GWIT) °C		Needle - flame test (NFT)	Verdict
			75	125	cl. 11 +40	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								t_e	t_i	t_e	t_i									
Terminal block	--	--	--	0,9	--	--	--	--	--	[7]	[7]	√	--	--	--	--	--	--	--	P

Supplementary information:

[1] Parts of material classified at least HB40 or if relevant HBF

[2] Parts of material classified as V-0 or V-1

[3] Flame persisting longer than 2 s (= $t_e - t_i$) need only be reported for unattended appliances

[4] Surrounding parts subjected to the needle-flame test of annex E

[5] Base material classified as V-0 or if relevant VTM-0

[6] The GWIT pre-selection option, the 850 °C GWFI pre-selection option, and the 850 °C GWT are not applicable for attended appliances

[7] No flame occur during the glow wire test

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Appendix EMF			**P**
	TEST: Evaluation of the magnetic fields		
Applied standards:	IEC 62233:2005, EN 62233:2008 (incl. Corr.1:2008)		
Method	Used method: 5.5.2 Time domain evaluation		—
Applied Limit	ICNIRP Guidelines		—
Identification of the appliance	Type of apparatus	For all models	
	Rated Voltage	220-240 V~	
	Rated Frequency	50Hz	
Parameters required prior to the test	Laboratory Ambient Temperature	25 °C ± 10 °C	
	Supply Voltage	(Rated Voltage ± 2 %) V	
	Supply Frequency	(Rated Frequency ± 2 %) Hz	
Parameters recorded during the test	Laboratory Ambient Temperature	23 °C	
	Supply Voltage	230 V	
	Supply Frequency	50 Hz	
Operating Mode	Dehumidifying mode		

Method 5.5.2

Measuring Positions	Measuring Distance	Coupling Factor	Measurement Uncertainty
Around	30cm	0,18	--

Frequency (kHz)	Limit (%)	Measured Maximum Value (%)
0,01 to 400	100	2,0

Supplementary information:

The measured maximum value in this table may be weighted with the coupling factor if applicable, and the measurement uncertainty is applied if the measured result is more than 75 % of the limit.

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Attachment No. 1

ATTACHMENT TO TEST REPORT EN 60335-1
Household and similar electrical appliances - Safety - Part 1:
General requirements
EN 60335-1/A11:2014

Attachment contains

Cover page:	1 page
Requirements:	1 page
Total:	2 pages

Explanation for Abbreviations:
Possible Verdicts: **P** = Pass, **F**= Fail, **N/A** = Not Applicable
Remarks:
Throughout this report, a point is used as the decimal separator.

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Attachment No.1

Clause	Requirement – Test	Result – Remark	Verdict

EN 60335-1: A11 2014			
Clause	**Requirement –Test**	**Result - Remark**	**Verdict**
7.14	In NOTE Z1, replace "IEC 82079-1" by "EN 82079-1".		P
Annex ZF	In Table ZF.1 – List of standards under CLC/TC 61, replace line of EN 60335-2-38 by the following: EN 60335-2-38, Commercial electric griddles and griddle grills ☒ ☒ With moving parts		N/A

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-2-40
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
Part-2-40: Particular requirements for electrical heat pumps, air conditioners and dehumidifiers

Differences according to:		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 (incl. Corr.:2014)
Attachment Form No.	:	EU_GD_IEC60335_2_40J
Attachment Originator	:	VDE
Master Attachment	:	2014-06

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

	CENELEC COMMON MODIFICATIONS		
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	220-240V~	P
	Multi-phase appliances to be connected to the supply mains: 400 V covered		N/A
7.10	Devices used to start/stop operational functions of the appliance distinguished from other manual devices by means of shape, size, surface texture, position, etc.		P
	An indication that the device has been operated is given by:		-
	- a tactile feedback, or		N/A
	- an audible and visual feedback		P
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
	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
7.12.Z1	The specific instructions related to the safe operation of this appliance is collated together in the front section of the user instructions		P

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	The height of the characters, measured on the capital letters, is at least 3 mm		P
	These instructions are also available in an alternative format, e.g. on a website		P
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position, except that appliances normally used on the floor and having a mass exceeding 40 kg are not tilted. (EN 60335-1:2012/AC:2014)		P
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		P
8.2	Compliance is checked by applying the test probes of EN 61032		P
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A
11.8	Footnotes to “External enclosure of motor-operated appliances” to be taken into account		P
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
20.2	When using the test probe similar to test probe B with a circular stop face, the accessories and detachable covers are removed		P
	Test probe 18 applied with a force of 2,5 N on the appliance fully assembled		P
24.1	Components comply with the safety requirements specified in the relevant standards as far as they reasonably apply		P

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	The requirements of clause 29 of this standard apply between live parts of components and accessible parts of the appliance.		P
	The requirements of 30.2 of this standard apply to parts of non-metallic material in components including parts of non-metallic material supporting current-carrying connections inside components		P
	Components that have not been previously tested or do not comply with the standard for the relevant component are tested according to the requirements of 30.2		N/A
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the standard for the relevant component need not be retested provided that:		-
	- the severity specified in the component standard is not less than the severity specified in 30.2, and		P
	- the test report for the component states whether it complied with the standard for the relevant component with or without flame, flames not exceeding 2 s during the test are ignored		P
	Unless components have been previously tested and found to comply with the relevant standard for the number of cycles specified, they are tested in accordance with 24.1.1 to 24.1.9		N/A
	For components mentioned in 24.1.1 to 24.1.9, no additional tests specified in the relevant standard for the component are necessary other than those specified in 24.1.1 to 24.1.9		N/A
	Components that have not been separately tested and found to comply with the relevant standard, and		N/A
	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		N/A
	Lamp holders and starter holders that have not been previously tested and found to comply with the relevant standard are tested as a part of the appliance and additionally comply with the gauging and interchangeability requirements of the relevant standard under the conditions occurring in the appliance		N/A

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Where the relevant standard specifies these gauging and interchangeability requirements at elevated temperatures, the temperatures measured during the tests of clause 11 are used		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 IEC 60320-1,		N/A
	if direct supply to these parts from the supply mains gives rise to a hazard		N/A
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is EN 41003		N/A
	Compliance with clause 8 of this standard is not impaired by connecting the appliance to a device covered by EN 41003		N/A
24.Z1	For motor running capacitors (IEC 60252-1 type P2) with a metallic enclosure having an overpressure fuse the flame testing of internal plastic parts supporting current carrying connections as required in 30.2.2 and 30.2.3.1 is not necessary		N/A
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A, fitted with a plug complying with the following standard sheets of IEC/TR 60083:		-
	- for class I appliances: standard sheet C2b, C3b or C4.....:	Approved by DIN VDE 0620-1	P
	- for class II appliances: standard sheet C5 or C6.....:		N/A
25.7	Rubber sheathed cords (60245 IEC 53) are not suitable for appliances intended to be used outdoors or when they are liable to be exposed to significant amount of ultraviolet radiation		N/A
	Halogen-free thermoplastic compound sheathed supply cords have properties at least those of:		-
	- halogen-free thermoplastic compound sheathed cords (H03Z1Z1H2-F or H03Z1Z1-F), for appliances having a mass not exceeding 3 kg		N/A

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	- halogen-free thermoplastic compound sheathed cords (H05Z1Z1H2-F or H05Z1Z1-F), for other appliances		N/A
	Cross-linked halogen-free compound sheathed supply cords have properties at least those of cross-linked halogen-free compound sheathed cords (H07ZZ-F)		N/A
26.11	Conductors connected by soldering are not considered to be positioned or fixed so that reliance is not placed upon the soldering alone to maintain them in position unless they are held in place near the terminals independently of the solder		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 the test is as specified in 19.7		N/A
ZA	**ANNEX ZA** (NORMATIVE) **SPECIAL NATIONAL CONDITIONS**		-
	Norway		-
19.5	The test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
	Norway		-
22.2	The second paragraph of this subclause, dealing with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system		N/A

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	All CENELEC countries		-
25.6 and 25.25	Information concerning National plug and socket-outlets is available from the CENELEC website. Normative national requirements concerning plug and socket-outlets are shown in the relevant National standard		P
	Ireland and United Kingdom		-
25.8	In the table, the lines for 10 A and 16 A are replaced by:		-
	> 10 and ≤ 13 1,25 (1,0)[b](EN 60335-1:2012/AC:2014)		N/A
	> 13 and ≤ 16 1,5 (1,0)[b] (EN 60335-1:2012/AC:2014)		N/A
ZB	**ANNEX ZB** (INFORMATIVE) **A-DEVIATIONS**		-
	Ireland		-
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs complying with I.S. 401:1997, or equivalent, to be fitted to domestic appliances		N/A
	United Kingdom		-
25.6	These regulations apply to all plugs for domestic use at a voltage of not less than 200 V and in general allow only plugs to BS 1363 to be fitted to domestic appliances. It also allows plugs to BS 4573 and EN 50075 to be fitted to shavers and toothbrushes		N/A
ZC	**ANNEX ZC** (NORMATIVE) **NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**		-
	A list of referenced documents in this standard		N/A
ZD	**ANNEX ZD** (INFORMATIVE) **IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS**		-

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IEC60335_2_40J - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	A table with IEC and CENELEC code designations for flexible cords		P
ZE	**ANNEX ZE** (NORMATIVE) **SPECIFIC ADDITIONAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE**		-
7.1	Business name and full address of the manufacturer and, where applicable, his authorized representative.....:		N/A
	Model or type reference.....:		N/A
	Serial number, if any.....:		N/A
	Production year		N/A
	Designation of the appliance.....:		N/A
7.12	Instructions provided with the appliance so that the appliance can be used safely		N/A
	The instructions contain at least the following information:		-
	- 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 if 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

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Clause	Requirement - Test	Result - Remark	Verdict
	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
	“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)		-

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Clause	Requirement - Test	Result - Remark	Verdict
	- 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 includes a warning to disconnect the appliance from its power source during service and when replacing parts		N/A
	If the removal of the plug is foreseen, it is clearly indicated that the removal of the plug has to be 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:		-

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Clause	Requirement - Test	Result - Remark	Verdict
	- fixed guards or interlocking movable guards preventing access to those sections of the parts that are not used in the work, and		N/A
	- adjustable guards restricting access to those sections of the moving parts where access is necessary		N/A
	Interlocking movable guards used where frequent access is required		N/A
21.1	Appliances and their components and fittings have adequate mechanical strength and is constructed to withstand such rough handling that may be expected in normal use, during transportation, assembly, dismantling, scrapping and any other action involving the appliance		N/A
22.ZE.1	For appliances provided with a seat, the seat gives adequate stability		N/A
	The distance between the seat and the control devices capable of being adapted to the operator		N/A
22.ZE.2	For appliances provided with separate devices for the start and the stop functions, the stop function is unambiguously identifiable and does always override the start function		N/A
	For appliances provided with one device performing the start and the stop function, the stop function is unambiguously identifiable and does always override the start function		N/A
22.ZE.3	Appliances designed in such a way that incorrect mounting is avoided, if this can lead to an unsafe situation		N/A
	If this is not possible, information on the correct mounting is given directly on the part and/or the enclosure		N/A
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

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Clause	Requirement - Test	Result - Remark	Verdict
22.ZE.5	The fixing systems of fixed guards which prevent access to dangerous moving transmission parts only removable with the use of tools		N/A
	If such guards have to be removed by the user for routine cleaning or maintenance their fixing systems remain attached to the fixed guards or to the machine after removal		N/A
	Where possible, guards are incapable of remaining in place without their fixings		N/A
	This does not apply if, after removal of the screws, or if the component is incorrectly repositioned, the appliance becomes inoperative		N/A
	Movable guards are interlocked		N/A
	The interlocking devices prevent the start of hazardous appliance functions until the guards are fixed in their position, and give a stop command whenever they are no longer closed		N/A
	Where it is possible for an operator to reach the danger zone before the risk due to hazardous appliance functions has ceased, movable guards associated with a guard locking device in addition to an interlocking device that:		-
	- prevents the start of hazardous appliance functions until the guard is closed and locked, and		N/A
	- keeps the guard closed and locked until the risk of injury from the hazardous appliance functions has ceased		N/A
	Interlocking movable guards remain attached to the appliance when open, and		N/A
	they are designed and constructed in such a way that they can be adjusted only by means of an intentional action		N/A
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

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Clause	Requirement - Test	Result - Remark	Verdict
	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**		-
	List of standards under CENELEC/TC61 with the allocation under the LVD (Low Voltage Directive) or the MD (Machinery Directive) .....:	LVD	P
ZG	**ANNEX ZG** (NORMATIVE) **UV APPLIANCES**		-
	The following modifications to this standard apply to appliances having UV emitters		N/A
	This annex is not applicable to appliances covered by the scopes of IEC 60335-2-27, IEC 60335-2-59 or IEC 60335-2-109		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
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		N/A
ZZ	**ANNEX ZZ** (INFORMATIVE) **COVERAGE OF ESSENTIAL REQUIREMENTS OF EC DIRECTIVES**		-
	Description of the relation between this European standard and the LVD (Low Voltage Directive, 2006/95/EC) and the MD (Machinery Directive, 2006/42/EC)	LVD 2006/95/EC replaced by 2014/35/EU	P
ZAA	**ANNEX ZAA (INFORMATIVE) (EN 60335-2-40/A11)** **THE RELEVENCE OF THE PRESSURE EQUIPMENT DIRECTIVE**		--
	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)		-
	- dangerous refrigerants (Annex II, Table 1) (EN 60335-2-40/A11):		-
	- volume not exceeding 1 l, or (EN 60335-2-40/A11)		N/A
	- pressure x volume not exceeding 5 MPa l (EN 60335-2-40/A11)		N/A
	- 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)		P

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Clause	Requirement - Test	Result - Remark	Verdict
	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)		N/A
	- pressure not exceeding 1 MPa and numerical designation not exceeding 100, or (EN 60335-2-40/A11)		N/A
	- pressure exceeding 1 MPa and pressure x numerical designation not exceeding 100 MPa (EN 60335-2-40/A11).		N/A
	- non-dangerous refrigerants (Annex II, Table 7) (EN 60335-2-40/A11):		-
	- numerical designation not exceeding 100, or (EN 60335-2-40/A11)		P
	- pressure x numerical designation not exceeding 350 MPa (EN 60335-2-40/A11).		P
	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)		N/A
	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)		N/A
	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)		N/A
	Commonly used non-dangerous refrigerants, identified as Group 2 in the directive, are listed in table ZAA.2 (EN 60335-2-40/A11)		P

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Clause	Requirement - Test	Result - Remark	Verdict
ZAB	**ANNEX ZAA (NORMATIVE) (EN 60335-2-40/A13) EMISSION OF ACOUSTICAL NOISE FROM APPLIANCES COVERED BY ANNEX ZE**		-
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

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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)		N/A
	- he 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)		N/A
	- 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

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Clause	Requirement - Test	Result - Remark	Verdict
	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
	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

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Attachment No. 3

Material list for PAH risk assessment according to AfPS GS 2014:01 PAK.

Material No.	Location / Function of the material	Supplier/ manufacture name	Type/ Model No. of the material	Category	Smell	Rigidity	Colour	Chem. test needed?	Evaluation result	Evidence attachment technical report No.
1	Plug(Black)	ZHONGSHAN GUZHEN HONGLI CABLE & APPLIANCE FACTORY CO., LTD	HL-5	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colour ☐ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.169.15.00358.01B
2	Plug(white)	ZHONGSHAN GUZHEN HONGLI CABLE & APPLIANCE FACTORY CO., LTD	HL-5	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☐ Black or dark-colour ☒ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.169.15.00358.01A
3	Supply cord(Black)	ZHONGSHAN GUZHEN HONGLI CABLE & APPLIANCE FACTORY CO., LTD	H05VV-F	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☒ Black or dark-colour ☐ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.169.15.00358.01B
4	Supply cord(white)	ZHONGSHAN GUZHEN HONGLI CABLE & APPLIANCE FACTORY CO., LTD	H05VV-F	☐ 1 ☐ 2 ☒ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☐ Black or dark-colour ☒ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.169.15.00358.01A
5	Enclosure (white)	Zhongshan Lianchang Co., Ltd	ABS plastic	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☐ Black or dark-colour ☒ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.15.00870.01
6	Control panel transparent-purple plastic	Zhongshan Lianchang Co., Ltd	ABS plastic	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☒ Soft ☐ Flexible ☐ Rigid	☐ Black or dark-colour ☒ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.15.00870.01
7	Rotary	Zhongshan Lianchang Co., Ltd	ABS plastic	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☐ Flexible ☒ Rigid	☒ Black or dark-colour ☐ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.15.00870.01
8	Air filter	United International Co., Ltd	PP plastic	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☐ Black or dark-colour ☒ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.14.05184.01
9	Air filter	United International Co., Ltd	PP plastic	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☒ Black or dark-colour ☐ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.14.05184.01

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TÜV SÜD Certification and Testing (China) Co., Ltd.
Guangzhou Branch, TÜV SÜD Group
5F, Communication Building, 163 Pingyun Rd, Huangpu Ave. West,Guangzhou, 510656, P.R. China

Attachment No. 3

Material No.	Location / Function of the material	Supplier/ manufacture name	Type/ Model No. of the material	Category	Smell	Rigidity	Colour	Chem. test needed?	Evaluation result	Evidence attachment technical report No.
10	Water stopper	Zhongshan Lianchang Co., Ltd	Rubber	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☒ Black or dark-colour ☐ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.15.00870.01
11	Control plate (transparent plastic)	Zhongshan Lianchang Co., Ltd	PC	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☒ Soft ☐ Flexible ☐ Rigid	☐ Black or dark-colour ☒ White or light-colour ☐ ……	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.15.00870.01
12	Exhaust duct(Grey)	Zhongshan Lianchang Co., Ltd	PP plastic	☐ 1 ☒ 2 ☐ 3	☐ Yes ☒ No	☐ Soft ☒ Flexible ☐ Rigid	☐ Black or dark-colour ☐ White or light-colour ☒ Grey	☐ No ☒ Yes	☒ PASS ☐ Fail	64.166.15.00870.01

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Product Service

CERTIFICATE

No. Z1A 16 10 62471 301

Holder of Certificate: **United International Co., Ltd.**
12 F, NO. 520
SEC. 4, REN AI RD.
110 TAIPEI
TAIWAN

Certification Mark:

Product: **Air dehumidifier (Dehumidifier)**

Tested according to:
EN 60335-2-40:2003/A13:2012
EN 60335-1:2012/A11:2014
EN 62233:2008
AfPS GS 2014:01 PAK

The product meets the safety and health requirements of the German Product Safety Act section 20 to 22 ProdSG. The certification marks shown above can be affixed on the product. It is not permitted to alter the certification marks in any way. In addition the certificate holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. See also notes overleaf.

Test report no.: 6411108132117

Valid until: 2021-10-17

Date, 2016-10-21

(Gary Sun)

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Product Service

CERTIFICATE
No. Z1A 16 10 62471 301

Model(s): **PD10 series, PD12 series, PD16 series, PD19 series, PD20 series, PD25 series (see page 3-4 for model details)**

Brand Name: **air master**

Parameters:

Rated voltage:	220-240 V
Rated frequency:	50 Hz
Rated power input:	See page 3-4
Protection class:	I
Refrigerant:	R134a
Degree of protection:	See page 3-4

Factory(ies): 62428

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Product Service

CERTIFICATE

No. Z1A 16 10 62471 301

Input power	IP degree	Model					
250W	IP21	PD10-SBE	PD10-SYE	--	--	--	--
		PD10-SAE	PD10-SAM	PD10-SDE	PD10-SAN	PD10-SDN	PD10-SDM
		PD10-SEE	PD10-SFE	PD10-SJE	--	--	--
260W	IP21	PD12-SBE	PD12-SYE	--	--	--	--
		PD12-SAE	PD12-SAM	PD12-SDE	PD12-SAN	PD12-SDN	PD12-SDM
		PD12-SEE	PD12-SFE	PD12-SJE	--	--	--
410W	IP21	PD16-SBE	PD16-SYE	--	--	--	--
		PD16-SAE	PD16-SAM	PD16-SDE	PD16-SAN	PD16-SDN	PD16-SDM
		PD16-SEE	PD16-SFE	PD16-SJE	--	--	--
410W	IP21	PD19-SAE	PD19-SAM	PD19-SDE	PD19-SAN	PD19-SDN	PD19-SDM
		PD19-SEE	PD19-SFE	PD19-SJE	--	--	--
		PD19-SBE	PD19-SYE	--	--	--	--
480W	IP21	PD20-SBE	PD20-SYE	--	--	--	--
		PD20-SAE	PD20-SAM	PD20-SDE	PD20-SAN	PD20-SDN	PD20-SDM
		PD20-SEE	PD20-SFE	PD20-SJE	--	--	--
390W	IP21	PD20-SBEH	PD20-SYEH	--	--	--	--
		PD20-SAEH	PD20-SAMH	PD20-SDEH	PD20-SANH	PD20-SDNH	PD20-SDMH
		PD20-SEEH	PD20-SFEH	PD20-SJEH	--	--	--
500W	IP21	PD25-SBE	PD25-SYE	--	--	--	--

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TÜV SÜD Product Service

CERTIFICATE

No. Z1A 16 10 62471 301

Input power	IP degree	Model					
250W	IPX0	PD10-SCR	PD10-SCE	PD10-SGR	PD10-SGE	PD10-SHR	PD10-SHE
		PD10-CAR	PD10-CAE	PD10-BAR	PD10-DAR	PD10-DAE	PD10-DBE
		PD10-SYR	PD10-SAR	PD10-SDR	PD10-SER	PD10-SFR	PD10-SJR
		PD10-IAR	PD10-IBR	--	--	--	--
260W	IPX0	PD12-SCR	PD12-SCE	PD12-SGR	PD12-SGE	PD12-SHR	PD12-SHE
		PD12- CAR	PD12- CAE	PD12-BAR	PD12-DAR	PD12-DAE	PD12-DBE
		PD12-SYR	PD12-SAR	PD16-SDR	PD12-SER	PD12-SFR	PD12-SJR
		PD12-IAR	PD12-IBR	--	--	--	--
410W	IPX0	PD16-SCR	PD16-SCE	PD16-SGR	PD16-SGE	PD16-SHR	PD16-SHE
		PD16- CAR	PD16- CAE	PD16-BAR	PD16-DAR	PD16-DAE	PD16-DBE
		PD16-SYR	PD16-SAR	PD16-SDR	PD16-SER	PD16-SFR	PD16-SJR
		PD16-IAR	PD16-IBR	--	--	--	--
410W	IPX0	PD19-SCR	PD19-SCE	PD19-SGR	PD19-SGE	PD19-SHR	PD19-SHE
		PD19- CAR	PD19- CAE	PD19-BAR	PD19-DAR	PD19-DAE	PD19-DBE
		PD19-SYR	PD19-SAR	PD19-SDR	PD19-SER	PD19-SFR	PD19-SJR
		PD19-IAR	PD19-IBR	--	--	--	--
480W	IPX0	PD20-SCR	PD20-SCE	PD20-SGR	PD20-SGE	PD20-SHR	PD20-SHE
		PD20- CAR	PD20- CAE	PD20-BAR	PD20-DAR	PD20-DAE	PD20-DBE
		PD20-SYR	PD20-SAR	PD20-SDR	PD20-SER	PD20-SFR	PD20-SJR
		PD20-IAR	PD20-IBR	--	--	--	--
390W	IPX0	PD20-SCRH	PD20-SCEH	PD20-SGRH	PD20-SGEH	PD20-SHRH	PD20-SHEH
		PD20-CARH	PD20-CAEH	PD20-BARH	PD20-DARH	PD20-DAEH	PD20-DBEH
		PD20-SYRH	PD20-SARH	PD20-SDRH	PD20-SERH	PD20-SFRH	PD20-SJRH
		PD20-IARH	PD20-IBRH	--	--	--	--
500W	IPX0	PD25-SYR	--	--	--	--	--

Test report no.: 6411108132117

Date, 2016-10-21

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Product Service

Attestation of Conformity

No. N8A 16 10 62471 302

Holder of Certificate: **United International Co., Ltd.**
12 F, NO. 520
SEC. 4, REN AI RD.
110 TAIPEI
TAIWAN

Product: **Air dehumidifier (Dehumidifier)**

This Attestation of Conformity is issued on a voluntary basis according to the Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits. It confirms that the listed equipment complies with the principal protection requirements of the directive and is based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for testing and certification. See also notes overleaf.

Test report no.: 6411108132117

Date, 2016-10-21 (Gary Sun)

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CE After preparation of the necessary technical documentation as well as the EU conformity declaration the required CE marking can be affixed on the product. That declaration of conformity is issued under the sole responsibility of the manufacturer. Other relevant EU-directives have to be observed.

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Product Service

Attestation of Conformity
No. N8A 16 10 62471 302

Model(s): **PD10 series, PD12 series, PD16 series, PD19 series, PD20 series, PD25 series (see page 3-4 for model details)**

Brand: **air master**

Parameters:

Rated voltage:	220-240 V
Rated frequency:	50 Hz
Rated power input:	See page 3-4
Protection class:	I
Refrigerant:	R134a
Degree of protection:	See page 3-4

Tested according to:

EN 60335-2-40:2003/A13:2012
EN 60335-1:2012/A11:2014
EN 62233:2008

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Product Service

Attestation of Conformity

No. N8A 16 10 62471 302

Input power	IP degree	Model					
250W	IP21	PD10-SBE	PD10-SYE	--	--	--	--
		PD10-SAE	PD10-SAM	PD10-SDE	PD10-SAN	PD10-SDN	PD10-SDM
		PD10-SEE	PD10-SFE	PD10-SJE	--	--	--
260W	IP21	PD12-SBE	PD12-SYE	--	--	--	--
		PD12-SAE	PD12-SAM	PD12-SDE	PD12-SAN	PD12-SDN	PD12-SDM
		PD12-SEE	PD12-SFE	PD12-SJE	--	--	--
410W	IP21	PD16-SBE	PD16-SYE	--	--	--	--
		PD16-SAE	PD16-SAM	PD16-SDE	PD16-SAN	PD16-SDN	PD16-SDM
		PD16-SEE	PD16-SFE	PD16-SJE	--	--	--
410W	IP21	PD19-SAE	PD19-SAM	PD19-SDE	PD19-SAN	PD19-SDN	PD19-SDM
		PD19-SEE	PD19-SFE	PD19-SJE	--	--	--
		PD19-SBE	PD19-SYE	--	--	--	--
480W	IP21	PD20-SBE	PD20-SYE	--	--	--	--
		PD20-SAE	PD20-SAM	PD20-SDE	PD20-SAN	PD20-SDN	PD20-SDM
		PD20-SEE	PD20-SFE	PD20-SJE	--	--	--
390W	IP21	PD20-SBEH	PD20-SYEH	--	--	--	--
		PD20-SAEH	PD20-SAMH	PD20-SDEH	PD20-SANH	PD20-SDNH	PD20-SDMH
		PD20-SEEH	PD20-SFEH	PD20-SJEH	--	--	--
500W	IP21	PD25-SBE	PD25-SYE	--	--	--	--

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TÜV SÜD Product Service

Attestation of Conformity

No. N8A 16 10 62471 302

Input power	IP degree	Model					
250W	IPX0	PD10-SCR	PD10-SCE	PD10-SGR	PD10-SGE	PD10-SHR	PD10-SHE
		PD10-CAR	PD10-CAE	PD10-BAR	PD10-DAR	PD10-DAE	PD10-DBE
		PD10-SYR	PD10-SAR	PD10-SDR	PD10-SER	PD10-SFR	PD10-SJR
		PD10-IAR	PD10-IBR	--	--	--	--
260W	IPX0	PD12-SCR	PD12-SCE	PD12-SGR	PD12-SGE	PD12-SHR	PD12-SHE
		PD12- CAR	PD12- CAE	PD12-BAR	PD12-DAR	PD12-DAE	PD12-DBE
		PD12-SYR	PD12-SAR	PD16-SDR	PD12-SER	PD12-SFR	PD12-SJR
		PD12-IAR	PD12-IBR	--	--	--	--
410W	IPX0	PD16-SCR	PD16-SCE	PD16-SGR	PD16-SGE	PD16-SHR	PD16-SHE
		PD16- CAR	PD16- CAE	PD16-BAR	PD16-DAR	PD16-DAE	PD16-DBE
		PD16-SYR	PD16-SAR	PD16-SDR	PD16-SER	PD16-SFR	PD16-SJR
		PD16-IAR	PD16-IBR	--	--	--	--
410W	IPX0	PD19-SCR	PD19-SCE	PD19-SGR	PD19-SGE	PD19-SHR	PD19-SHE
		PD19- CAR	PD19- CAE	PD19-BAR	PD19-DAR	PD19-DAE	PD19-DBE
		PD19-SYR	PD19-SAR	PD19-SDR	PD19-SER	PD19-SFR	PD19-SJR
		PD19-IAR	PD19-IBR	--	--	--	--
480W	IPX0	PD20-SCR	PD20-SCE	PD20-SGR	PD20-SGE	PD20-SHR	PD20-SHE
		PD20- CAR	PD20- CAE	PD20-BAR	PD20-DAR	PD20-DAE	PD20-DBE
		PD20-SYR	PD20-SAR	PD20-SDR	PD20-SER	PD20-SFR	PD20-SJR
		PD20-IAR	PD20-IBR	--	--	--	--
390W	IPX0	PD20-SCRH	PD20-SCEH	PD20-SGRH	PD20-SGEH	PD20-SHRH	PD20-SHEH
		PD20-CARH	PD20-CAEH	PD20-BARH	PD20-DARH	PD20-DAEH	PD20-DBEH
		PD20-SYRH	PD20-SARH	PD20-SDRH	PD20-SERH	PD20-SFRH	PD20-SJRH
		PD20-IARH	PD20-IBRH	--	--	--	--
500W	IPX0	PD25-SYR	--	--	--	--	--

Test report no.: 6411108132117

Date, 2016-10-21

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11/12/2025

חשבונית מס מספר 20183

מקור

לכבוד:
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פירוט	כמות	מחיר	סה"כ שח
עריכת סרטון מה עשינו היום	1	300.00	300.00
הכנת סרטון שנת 2026 בפתח אורן מזרח + ארי	1	400.00	400.00
		סך לפני מעמ	700.00
		מעמ 18%	126.00
		סה"כ	**826.00**

הערות
פרטים להעברות:
שם מלא: עדן יצחק
בנק: דיסקונט (11)
סניף: 55
מס' חשבון: 095179889

מסמך ממוחשב
חתום דיגיטלית