

APPLICATION FOR LOW VOLTAGE DIRECTIVE

On Behalf of

Suzhou Langji Technology Co., Ltd.

Cabinet Air Conditioner

Model No.: SAD115-2, SAD103-2, SAD104-2,
SAD105-2, SAD106-2, SAD108-2,
SAD110-2, SAD112-2, SAD120-2,
SAD125-2, SAD130-2, SAD135-2,
SAD150-2, SDC115-1, SDC103-1,
SDC104-1, SDC106-1, SDC108-1,
SDC110-1, SDC120-1

Prepared For : Suzhou Langji Technology Co., Ltd.

Workshop No. 3, No. 58, Tongxin Road,
Tongan Town, High-Tech Zone, Suzhou,
Jiangsu Province, China

Prepared By : BEIDE (SHENZHEN) PRODUCT SERVICE
LIMITED

CHINA: 6F, Bldg E, Hourui 3rd Ind Zone,
Xixiang, Bao'an Dist, Shenzhen, China

Date of Test : Jun.25-Jul.05,2019

Date of Report : Jul.05,2019

Report Number : B-S190724337

LVD Report EN 60335 Household and similar electrical appliances -Safety- Part 1: General requirements Part 2-40: Particular requirements for electrical heat pumps, air conditioners and dehumidifiers EN 62233 Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure	
Testing laboratory	Beide (Shenzhen) Product Service Limited
Address	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Report body.....	Beide (Shenzhen) Product Service Limited
Address(China).....	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Applicant	Suzhou Langji Technology Co., Ltd.
Address	Workshop No. 3, No. 58, Tongxin Road, Tongan Town, High-Tech Zone, Suzhou, Jiangsu Province, China
Client No.....	05128802
Standard	EN 60335-1:2012/A11:2014, EN 60335-2-40:2003/A13:2012/AC:2013, EN 62233:2008/AC:2008
Test Result	Compliance with EN 60335-1:2012/A11:2014, EN 60335-2-40:2003/A13:2012/AC:2013, EN 62233:2008/AC:2008
Procedure deviation	N.A.
Non-standard test method	N.A.
Type of test object	Cabinet Air Conditioner
Trademark	N.A.
Model/type reference	SAD115-2
Rating	220-240V~,50Hz,2.75A,605W
Manufacturer	Suzhou Langji Technology Co., Ltd.
Address	Workshop No. 3, No. 58, Tongxin Road, Tongan Town, High-Tech Zone, Suzhou, Jiangsu Province, China
Equipment mobility	Fixed appliance
Class of equipment.....	Class I

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see appended table)" refers to a table appended to the report.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

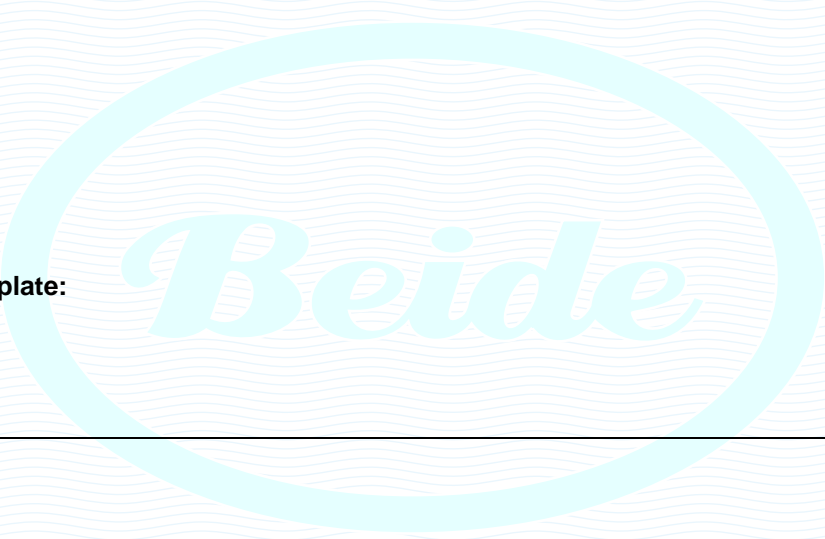
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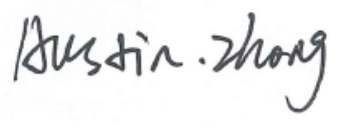


Photo-document

(See appendix 1)

Copy of marking plate:

(See appendix 2)



Possible test case verdicts :	
test case does not apply to the test object	N(A.)
test object does meet the requirement	P(ass)
test object does not meet the requirement	F(ail)
Name and address of the testing laboratory: <u>Beide (Shenzhen) Product Service Limited</u> <u>6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China</u>	
Reported by :  Signature / Austin.Zhong	Date <u>Jul.05,2019</u>
Checked by :  Signature / Anna.Deng	Date <u>Jul.05,2019</u>
Approved by :  Signature / Martin.Wang	Date <u>Jul.05,2019</u>


EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
5.	GENERAL CONDITIONS FOR THE TESTS		P
5.1	Tests according to this standard are type tests.	All tests belong to type tests	P
5.2	The tests are carried out on a single appliance.		P
5.3	Except special instruction, the tests are carried out in the order of the clauses.		P
5.4	When testing appliances which are also supplied by other energies such as gas, the influence of their consumption has to be taken into account.		N
5.5	The tests are carried out with the appliance or any movable part of it placed in the most unfavorable position which may occur in normal use.		P
5.6	Controls or switching devices in the user area are adjusted to the most unfavourable setting.		P
	Any controls which regulate the temperature or humidity of the conditioned space are rendered inoperative during the test.		P
5.7	The tests are carried out in a draught free location and in general at an ambient temperature of 20°C ± 5°C.		P
5.8.1	Appliances for A.C. only are tested with A.C. at rated frequency, if marked, and those for A.C./D.C. are tested at the more unfavorable supply.	A.C. only	P
5.8.2	Appliances having more than one rated voltage are tested on the basis of the most unfavorable voltage.		P
5.8.3	For heating appliance and combined appliance marked with a rated power input range		N
5.8.4	For appliances marked with a rated voltage range and rated power input corresponding to the mean of the rated voltage range		P
5.9	Alternative heating elements or accessories are made available by the appliance manufacturer		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
5.10	The tests are carried on the appliance as supplied.		P
	Fixed appliances and built-in appliances are installed in accordance with instruction before testing.		P
	For split-package units, the refrigerant lines shall be installed in accordance with the installation instructions. The refrigerant line length shall be the maximum length stated in the installation instructions or 7,5 m, whichever is the shorter. The thermal insulation of the refrigerant lines shall be applied in accordance with the installation instructions.		N
5.11	Appliances intended to be connected to fixed wiring by flexible cord are tested with the appropriate flexible cord connected to the appliance.		P
5.12	For combined appliance and heating appliance, the appliance has to operate a power input multiplied by a factor, this applies only to heating elements without appreciable positive temperature coefficient of resistance.		N
5.13	The tests for appliances with PTC heating element are made at a voltage corresponding to the specified power input.		N
5.14	For class 0I appliance or class I appliance have accessible metal parts without earthing and are not separated from live parts by an intermediate metal part which is earthed, such parts are checked for compliance with the appropriate requirements specified for class II construction.	Class I	N
5.15	Appliances have parts operating at safety extra-low voltage, it is checked for compliance with the appropriate requirements specified for class III construction.		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
5.16	When testing electronic circuit, the supply is to be free from perturbations from external sources that can influence the results of the tests.		P
5.17	Appliances powered by rechargeable batteries are tested according to annex B.	AC mains	N
5.18	If linear and angular dimensions are specified without a tolerance, ISO 2768-1 is applicable.		P
5.101	Motor-compressors are also subjected to the relevant test of Clause 19 of IEC 60335-2-34, unless the motor-compressor complies with that standard, in which case it is not necessary to repeat these tests.		P
5.102	Motor compressors that are tested and comply with IEC 60335-2-34 need not be additionally tested for Clause 21.		P

6.	CLASSIFICATION		P
6.1	Appliances shall be Class I, Class II or Class III.	Class I	P
6.2	Appliance shall have the appropriate degree of protection water.		P
	Appliances or parts of appliances intended for outdoor use shall be at least IPX4		N
6.101	Appliances shall be classified according to the accessibility either as appliance accessible to the general public or as appliance not accessible to the general public.	Appliance not accessible to the general public.	P

7.	MARKING AND INSTRUCTION		P
7.1	Appliances shall be marked with the:		P
	- Rated voltage or voltage range (V)		P
	- Nature of supply	~	P
	- Rated frequency or frequency range (Hz)		P
	- Name, trade mark of identification mark of the manufacturer or responsible vendor	See marking label	P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	- Model or type reference		P
	- Symbol for Class II construction		N
	- IP number	IPX0	P
	Enclosure of water valves incorporated in external hose-sets for connection of an appliance to water mains shall be marked with 		P
	See instructions for additional important information.		P
7.2	Warning for multi-nature of power supplied stationary appliances		N
7.3	Appliances having a range of rated values and which can be operated without adjustment shall be marked with the lower and upper limits of the range separated by a hyphen.		P
	The requirement also applies when the adjustment has to be made by the maintenance person.		P
7.4	Appliance can be adjusted for different rated voltage, the voltage which appliance is adjusted shall be clearly discernible		P
7.5	Marking of rated power input or current for each rated voltage or rated voltage range.		P
	The upper and lower limits of the rated power input or rated current shall be marked on the appliance so that the relation between input and voltage is clear.		P
7.6	Correct symbols used		P
	The symbol for nature of supply shall be placed next to the marking for rated voltage.	See marking label	P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	Symbol for Class II appliances shall be placed so that it will obvious that it is a part of the technical information and is unlikely to be confused with any other marking.	Class I	N
	Units of physical quantity and their symbols shall be those of international standardized system.		P
	When a flammable refrigerant is employed, a warning symbol B.3.2 of ISO 3864, including colour and format, shall be permanently placed on the appliance. The perpendicular height of the triangle containing the "Caution, risk of fire" symbol shall be at least 30 mm.		P
	When a flammable refrigerant is employed, a symbol requiring reference to the manual [B.3.2 of ISO 3864], including colour and format, shall be permanently placed on the appliance.		P
7.7	A circuit diagram shall be fixed to the appliance for three supply or three above supply		P
	Control boards shall have a connection diagram that gives details of the electrical connections for controls and protective devices.		P
7.8	Terminal not for type Z attachment:		P
	- marking of terminals for the neutral conductor shall be indicated by the letter N		P
	- marking of protective earthing terminals		P
	- marking not placed on removable parts	On enclosure	P
	This symbol shall not be placed on screws, removable washers or other parts that can be removed when conductors are being connected.		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
7.9	Unless it is obviously unnecessary, switches which may cause a hazard shall be marked or placed so as to indicate clearly which part of appliance they control.		P
7.10	For stationary appliances, the different positions of switches shall be indicated by figures, letters or other visual means		N
7.11	Indication for direction of adjustment of controls		P
7.12	Instructions for safe use shall be provided	Refer to instructions	P
	If it is necessary to take precautions during user maintenance, appropriate details shall be given.		P
	Such instructions shall be supplied		-
	For appliances not accessible to the general public, the classification according to 6.101 shall be included.		P
17.2.1	In particular, the following information shall be supplied:		-
	– that the appliance shall be installed in accordance with national wiring regulations;		P
	– the dimensions of the space necessary for correct installation of the appliance including the minimum permissible distances to adjacent structures;		P
	– for appliances with supplementary heaters, the minimum clearance from the appliance to combustible surfaces;		N
	– a wiring diagram with a clear indication of the connections and wiring to external control devices and supply cord;		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	– the range of external static pressures at which the appliance was tested (add-on heat pumps, and appliances with supplementary heaters, only);		N
	– the method of connection of the appliance to the electrical supply and interconnection of separate components;		P
	– indication of which parts of the appliance are suitable for outdoor use, if applicable;		P
	– details of type and rating of fuses;		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;		N
7.13	Instructions and other texts shall be written in official language	English	P
7.14	Marking shall be easily legible and durable		P
	Rubbing test and after the test marking shall be easily legible.		P
	Compliance is checked by measurement.		P
7.15	Marking 7.1 to 7.5 shall be on a main part of the appliance.		P
	Marking clearly discernible from outside if necessary after removal of a cover. for portable appliances it shall be possible to remove or open this cover with out the aid of a tool		P
	Stationary appliance: name or trademark and model or type reference visible after installation		P
	Indication for switches and controls in vicinity of components; not on removable parts if misleading		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	A marking may be located on a panel that can be removed for installation or service, providing that the panel shall be in place for the intended operation of the appliance.		P
7.16	If compliance with this standard depends upon the operation of a replaceable thermal link or fuse link, marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		P
7.101	A marking shall be provided for a replaceable fuse or a replaceable overload protective device provided as a part of a product or remote control assembly. It shall be visible when the cover or door of the compartment is open.		P
7.102	If the product is intended for permanent connection to fixed wiring with aluminium wires, the marking shall so state.		N
8.	PROTECTION AGAINST ACCESS TO LIVE PARTS		P
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	All positions are tested; detachable parts removed	No detachable parts	P
	Lamps are not removed		P
8.1.2	Use of test pin: no contact with live parts		N
8.1.3	Use of test stick: no contact with live parts except class II appliances		P
8.1.4	Accessible part not considered live if:		N
	– the part is supplied at safety extra-low voltage provided that:		N
	– for A.C., the peak value of the voltage does not exceed 42,4 V;		N
	– for D.C., the voltage does not exceed 42,4 V;		N

EN 60335-1+EN 60335-2-40

Clause	Requirement – Test	Result - Remark	Verdict
	– or separated from live parts by protective impedance,		N
	– D.C. current not exceeding 2 mA		N
	– A.C. peak value not exceeding 0,7 mA		N
	– for peak value 42,4 V up to and including 450 V capacitance not exceeding 0,1 µF		N
	– for peak value 450 V up to and including 15 kV capacitance not exceeding 45 µC		N
8.1.5	Live parts protected at least by basic insulation before installation or assembly		P
	- built-in appliances		N
	- fixed appliances		P
	- separate units		N
8.2	Class II appliances and constructions are adequately protected against accidental contact with basic insulation and metal parts separated from live parts with only basic insulation		N
	Only possible to touch parts separated from live parts by double or reinforced insulation		N

9.	STARTING OF MOTOR-OPERATED APPLIANCES	N
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10.	POWER INPUT AND CURRENT	P
10.1	Power input at rated voltage and normal operating temperature not deviating from rated input	P
10.2	Current at normal operating temperature not deviating from rated current:	P

11.	HEATING	P
11.1	No excessive temperatures in normal use	P
	Appliances and their surroundings shall not attain excessive temperatures in normal use.	P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
11.2	Hand-held appliances are held in their normal position of use.	Not Hand-held appliances	N
	Built-in appliances are installed in accordance with the instructions.		N
	Other heating appliances and other combined appliances are placed in a test corner		N
	Other motor-operated appliances are positioned as follows:		N
	-appliances normally placed on a floor or table in use are placed on a horizontal support;		N
	- appliances normally fixed to a wall are fixed to a vertical support;		N
	- appliances normally fixed to a ceiling are fixed underneath a horizontal support.		N
	Portable Appliances are tested away from the walls of the test corner.		N
	Appliances are installed in a test room in accordance with the manufacturer's installation instructions.		P
11.3	Temperature rises determined by thermocouples or resistance method	Thermocouples	P
11.4	Heating appliances operated under normal operation at 1,15 times rated power input	Not Heating appliances	N
11.5	Motor-operated appliance are operated under normal operation voltage between 0.94~1.06 times the rated voltage.		P
11.6	Combined appliances are operated as Motor-operated appliances.		N
11.7	Appliances are operated until steady conditions are established.		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	All appliances are operated continuously until steady conditions are achieved except for defrost tests.		P
11.8	Temperatures not exceeding values in table 3		P
	The temperature rise of the surfaces in the user area shall not exceed the limits specified for handles, knobs, grips and similar parts that are held for short periods only.		P
	The temperature of the air in the outlet duct shall not exceed 90 °C.		P
12.	VOID		--
13.	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		P
13.1	Leakage current not excessive and electric strength shall be adequate		P
	Heating appliances are operated at 1,15 times the rated power input.		N
	Motor-operated appliances and combined appliances are supplied at 1,06 times rated voltage.	Combined appliance	P
13.2	Leakage current measured by means of circuit described in standard		P
	For single-phase appliances, the measuring circuit is shown in the following figures:		P
	- class II, figure 1		N
	- other than class II, figure 2		P
	For stationary class I appliances, the leakage current may exceed 3,5 mA but shall not exceed 2 mA per kilowatt rated power input with a maximum value of 10 mA for appliances accessible to the general public, and a maximum value of 30 mA for appliances not accessible to the general public.		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	The data of leakage current	(see appended table)	P
13.3	Electric strength test of insulation	(see appended table)	P
	No breakdown during the test		P
14.	TRANSIENT OVERVOLTAGE		P
	Appliance shall withstand the transient overvoltage to which they may be subjected.		P
15.	MOISTURE RESISTANCE		P
15.1	Enclosure provides the degree of moisture protection in accordance with classification of appliance	IPX0	P
	Withstand electric strength test specified in 16.3		P
	No trace of water on insulation which can result in a reduction of distances and clearances below values specified in 29.1		P
15.1.1	Appliance subjected to test as specified other than classified IPX0		N
15.1.2	Hand-held appliance turned continuously through the most unfavorable positions during the test		N
	Built-in appliance installed according to the manufacturer's instruction		N
	Appliance normally used on a table or floor are placed on a horizontal unperforated support having a diameter of twice the oscillating tube radius minus 15 cm.		N
	Appliance normally fixed to a wall and appliance with a pins for insertion into socket-outlets are mounted as in normal use in a centre of a wooden board have a dimensions which are 15±5cm in excess of those of the orthogonal projection of the appliance on the board.		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	For IPX3 appliances, the base of wall-mounted appliances is placed at the same level as the pivot axis of the oscillating tube.		N
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube.		N
	Appliance with type X attachment, except those having specially prepared cord, are fitted with lightness permissible type of flexible cord of the smallest cross-sectional area specified in table 13.		N
	Detachable-parts are removed and subjected, if necessary, to the relevant treatment with the main part.		P
15.2	Appliance subjected to spillage of liquid in normal use shall be constructed so that spillage does not affect their electric insulation.		N
15.3	Humidity treatment for 48 h with 93±3%RH and ambient temperature between 20°C to 30°C.	28°C, 93%RH, 48h	P
	Appliance shall withstand the test of Clause. 16	(see clause.16)	P

16.	LEAKAGE CURRENT AND ELECTRIC STRENGTH		P
16.1	No excessive leakage current and adequate insulation and electric strength		P
16.2	Leakage current is measured within 5 s after 1,06 times rated voltage	(see appended table)	P
	For stationary class I appliances, the leakage current may exceed 3,5 mA but shall not exceed 2 mA per kilowatt rated power input with a maximum value of 10 mA for appliances accessible to the general public, and a maximum value of 30 mA for appliances not accessible to the general public.		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	For stationary class I heating appliances, the leakage current shall not exceed the following values:		N
	- for appliances of the professional type intended to be permanently connected to fixed wiring		N
	- for other appliances of the professional type		N
	- for other heating appliances		N
16.3	Electric strength tests	(see appended table)	P

17.	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUIT		N
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use		N
	Appliance supplied with 1,06 or 0,94 times rated voltage and the most unfavorable short-circuit or overload likely to occur in normal use applied		N
	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
	Temperature of the winding not exceeding the value specified in table 6	See table 11.8	N

18.	ENDURANCE	N
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19.	ABNORMAL OPERATION		P
19.1	Appliances shall be constructed so that as a result of abnormal or careless operation, the risk of fire, mechanical damage impairing safety or protection against electric shock is obviated as far as is practicable.		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	Appliances incorporating PTC heating elements are also subjected to the test of 19.13.		N
	Appliances incorporating electronic circuits are also subjected to the test of 19.11 and 19.12 as applicable.		P
19.2	Test of appliance with heating elements with restricted heat dissipation; test voltage (V): power input of 0.85 times rated power input under normal conditions.		N
	The motors, other than motor-compressors, are mounted on a support of wood or similar material. The motor rotors are locked; fan blades and brackets are not removed.		N
19.3	Test of 19.2 repeated; test voltage (V) is determined: power input of 1.24 times rated power input under normal conditions.		N
	If the motor-compressor has not been type-tested against the requirements of IEC 60335-2-34, a sample shall be provided with the rotor locked and being filled with oil and refrigerant as intended.		N
19.4	Test conditions as in Clause. 11, any control limiting the temperature during tests of Clause. 11 is short-circuited		N
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements.		N
	The test repeated on Class 0I and I appliances with reversed polarity and the other end of the heating element connected to the sheath		N
	The test not carried out on appliance intended to be permanently connect to fixed wiring and on appliances where an all-pole disconnection occurs during test 19.4.		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
19.6	Appliances with PTC heating elements tested as specified. Supplied at rated voltage, establishing steady conditions		N
19.7	The appliance is operated under stalled conditions by		-
	- Locking the rotor if the locked rotor torque is smaller than the full load torque.		P
	- Locking moving parts of other appliances		N
	Appliances provided with a timer or programmer are supplied at rated voltage for a period equal to the maximum period allowed by the timer or programmer.		N
	Other appliance are supplied at rated voltage for a period:		-
	- 30s for		N
	Hand-held appliance		N
	Appliance have to be kept switched on by hand or foot		-
	Appliance continuously loaded by hand.		N
	- for 5 min: appliance operated while attended.		N
	- until steady condition are established: for others		N
	The appliance is operated with the most unfavourable dispensing cycle for the motor under test.		N
19.8	One phase of appliances incorporating three-phase motors is disconnected, then three-phase motors operated at rated voltage		N
19.9	A running overload test is carried out on appliances incorporating motors		N
19.10	Series motor operated with the lowest possible load at 1.3 times rated voltage for 1 min.		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
19.11	Electronic circuits compliance checked by evaluation of the fault conditions for all circuits or parts of circuits		N
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 the following conditions:		-
	- the electronic circuit is a low-power circuit		N
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction in other parts of the appliance does not rely on the correct functioning of the electronic circuit		N
19.11.2	Fault conditions applied one at a time, the appliance operated under conditions the duration of the tests as specified:		N
	a) short-circuit of functional insulation if creepage distances or clearances distances are less than the special values		N
	b) open circuit at the terminals of any component		N
	c) short circuit of capacitors		N
	d) Short-circuit of any two terminals of an electronic component		N
	e) Failure of triacs in the diode mode		N
	f) Failure of an integrated circuit.		N
19.11.3	Appliance incorporating a protective electric circuit		N
19.11.4	Appliances incorporating a switch with an off position obtained by electronic disconnection, or a switch can be placed in the stand-by mode, or a protective electronic circuit		N
	The test is carried out with surge arresters disconnected, unless they incorporate spark gap.		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
19.11.4.1	The appliance is subjected to electrostatic discharges test level 4 being applicable.		N
19.11.4.2	The appliance is subjected to radiated fields in accordance with test level 3 being applicable.		N
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with test level 4 is applicable for the power supply lines.		N
19.11.4.4	The power supply terminals of the appliance are subjected to voltage surges		N
19.11.4.5	The appliance is subjected to injected current in accordance with test level 3 is applicable.		N
19.11.4.6	The appliance is subjected to voltage dips and interruption in accordance with each level is applicable.		N
19.11.4.7	The appliance is subjected to mains signals in accordance with test level 2 is applicable.		N
19.12	The safety of the appliance depends upon the operation of a miniature fuse-link		N
	--if current dose not exceed 2.1 times the rated current of fuse-link. Then the test is repeated with fuse short-circuited.		N
	--if current is more than 2.75 times the rated current of fuse-link, the circuit is considered to be adequately protected.		N
	--if current between 2.1 times and 2.75 times the rated current of fuse, fuse-link is short-circuited and test last:		N
	----relevant time or 30min for quick acting fuse		N
	---- relevant time or 2min for time lag fuse		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	After the tests and when the appliance has cooled to approximately room temperature, the enclosure shall not have deformed to such an extent that compliance with clause 8 is impaired and the appliance shall comply with 20.2 if it can still be operated.		P
	Appliances with PTC heating elements are supplied at rated voltage until steady conditions with regard to power input and temperature are established.		P
19.101	All appliances provided with supplementary heaters and with free air discharge are subjected to the following test in each mode of operation.		P
	Appliances are operated under the conditions specified in Clause 11, with any controls which limit the temperature during the test of Clause 11 short-circuited, and with the appliance covered.		P
	The covering is made with felt strips each having a width of 100 mm and lined with a single layer of textile material.		P
	The felt has a specified mass of 4 kg/m ² ± 0,4 kg/m ² and a thickness of 25 mm.		P
	The textile material consists of a prewashed double-hemmed cotton sheet having a mass between 140 g/m ² and 175 g/m ² in the dry condition.		P
	Thermocouples are attached to the back of small blackened disks of copper or brass, 15 mm in diameter and 1 mm thick.		P

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Clause	Requirement – Test	Result - Remark	Verdict
	The disks are spaced 50 mm apart and placed between the textile material and the felt on the vertical centre line of each strip.		P
	The disks are supported in such a way as to prevent them from sinking into the felt.		P

20.	STABILITY AND MECHANICAL HAZARDS		P
20.1	Appliances, other than fixed appliances and hand-held appliances, intended to be used on a surface such as the floor or a table shall have adequate stability.		N
	Compliance is checked by the following test.		N
	The appliance shall not overturn.		N
	Portable Appliances are subjected to the test while placed on their stands.		N
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury	No moving parts	N
	Protective enclosures, guards and similar parts are non-detachable		P
	Self-resetting thermal cut-outs and over current protective devices not causing a hazard, if unexpectedly reclosure		P
	Not possible to touch dangerous moving parts with test finger	The moving parts are protected by enclosures	P

21.	MECHANICAL STRENGTH		P
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P

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Clause	Requirement – Test	Result - Remark	Verdict
	The appliance is rigidly supported and three blows, having an impact energy of 0.5 J, are applied to every point of the enclosure that is likely to be weak.	After the test, the appliance is no damage	P
	Addition: Compliance is also checked by the tests of 21.101 and 21.102.		P
	For appliances with heating elements that are in direct contact with accessible glass panels, the impact energy of the blows applied to the panel is 2,00 J \pm 0,05 J.		P
21.2	Accessible parts of solid insulation shall have sufficient strength to prevent penetration by sharp implements.		P

22.	CONSTRUCTION		P
22.1	Appliance is marked with the first numeral of the IP system		P
22.2	Stationary appliance: means to provide all-pole disconnection from the supply provided, the following means being available:	Stationary appliance	-
	- a supply cord fitted with a plug		N
	- a switch complying with 24.3		P
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided		N
	- an appliance inlet		N
22.3	Appliance provided with pins for insertion into socket-outlet: no undue strain on socket-outlets		N
	Applied torque for engagement face in the vertical plane not exceeding 0,25 Nm		N

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Clause	Requirement – Test	Result - Remark	Verdict
	Appliances are heating in 1h with $70 \pm 2^{\circ}\text{C}$, then a pull force 50N is immediately applied for 1 min to each pin along their longitudinal axes. The pin shall not be displaced by more than 1mm.		N
	After fore test, each pin is subjected in turns to a torque 0.4Nm for 1 min in each direction. The pin shall not rotate unless rotation does not impair compliance with this standard.		N
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N
22.5	No risk of electric shock when touching the pins of the plug because of charged capacitor		N
	Plug test for 10 times and measured voltage between L/N not exceeding 34V in 1 second.		N
22.6	Electrical insulation not affected by condensing water or leaking liquid.		N
	The electrical insulation shall not be affected by snow which might enter the appliance enclosure		N
22.7	Appliances containing liquid shall be constructed so that they withstand the pressure likely to occur during use.		N
	There shall be no leakage of liquid.		N
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 which 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 it has adequately insulation.		P

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Clause	Requirement – Test	Result - Remark	Verdict
22.10	Location of protection of reset buttons of non-self-resetting controls is so that accidental resetting is unlikely		P
22.11	The 50 N force is not applied to clips used to fasten fan guards. Instead, a force of 15 N is applied in any direction to the clips in an attempt to release them.	15 N	P
22.12	Handles, knobs etc. fixed in a reliable manner		N
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		N
	Axial force 15 N applied to parts, the shape of which being so that an axial pull is unlikely to be applied for 1 min		N
	Axial force 30 N applied to parts, the shape of which being so that an axial pull is likely to be applied for 1 min		N
22.13	Unlikely that handles, when gripped as in normal use, make the operators hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		N
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance	No sharp edges.	P
	No exposed pointed ends of self tapping screws etc., liable 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
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands, no undue wear of contacts	No such device.	N

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Clause	Requirement – Test	Result - Remark	Verdict
	Reel and unreel tested with 6000 operations at a rate of about 30 times per min		N
	If doubt, electric strength test of 16.3 is applied, test voltage of 1000 V		N
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner to protecting against overheating to wall		P
	Heat shields shall be fixed so that it is not possible to remove them without the aid of a tool.		N
22.18	Current-carrying parts and other metal parts resistant to corrosion under normal conditions of use		P
22.19	Driving belts not used as electrical insulation unless they are constructed to prevent inappropriate replacement.		N
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless material used is non-corrosive, non-hygroscopic and non-combustible		P
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless impregnated		P
22.22	Appliances shall not contain asbestos	Not contain asbestos.	P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		P
22.24	Bare heating elements shall be supported so that, in case of rupture or sagging, the heating conductor cannot come into contact with accessible metal parts. Bare heating elements shall be used with metal enclosures only. Wood or composite enclosures are not allowed.		P

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Clause	Requirement – Test	Result - Remark	Verdict
22.25	The appliance other than class III shall be constructed that sagging heating conductors cannot come into contact with accessible metal parts	No such conductors	N
22.26	The electrical insulation of class II appliances and class II constructions shall not be affected if a hose ruptures or a seal leaks		N
22.27	Parts connected by protective impedance separated by double or reinforced insulation		P
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water: separated from live parts by double or reinforced insulation		N
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of protection against electric shock is maintained after installation		N
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or	Such as enclosure	P
	Constructed so 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	Creepage distances and clearances over supplementary and reinforced insulation not reduced below limited values		P
22.32	Supplementary and reinforced insulation designed or protected against deposition of dirt or dust		P
	Ceramic material not tightly sintered, similar material or beads alone not used as supplementary or reinforced insulation		N

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Clause	Requirement – Test	Result - Remark	Verdict
22.33	Conductive liquids which are or may become accessible in normal use are not in direct contact with live parts. Electrodes shall not be used		P
	For class II constructions, conductive liquids which are or may become accessible in normal use shall not be in direct contact with basic or reinforced insulation		N
22.34	Shafts of operating knobs, handles, levers etc. not live, unless the shaft is not accessible when the part is removed	No handles	N
22.35	Handles, levers and knobs, held or actuated in normal use, not becoming live in the event of an insulation fault		N
22.36	Handles continuously held in the hand in normal use are so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts		N
22.37	Capacitors in Class II appliances not connected to accessible metal parts, unless complying with 22.42		N
	Metal casings of capacitors in Class II appliances separated from accessible metal parts by supplementary insulation, unless complying with 22.42		N
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders only used for the connection of lamps	No lampholder used.	N
22.40	Motor-operated appliances and combined appliances, intended to be moved while in operation, are fitted with a switch to control the motor.		N

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Clause	Requirement – Test	Result - Remark	Verdict
22.41	Appliance shall not incorporate component, other than lamps, containing mercury.	No mercury used	N
22.42	Protective impedance consisting of at least two separate components		P
	Values specified in 8.1.4 not exceeded if any one of the components is short-circuited or open circuited		P
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		P
22.44	Appliances are not allowed to have an enclosure which is shaped or decorated so that the appliance is likely to be treated as toy by children	Not likely to be treated as toy by children	P
22.45	Air is used as a reinforced insulation, clearance can not be reduced below the values specified in 29.1.3 when external force applied to the enclosure.		P
22.46	Software used in protective electronic circuits shall be class B or class C.		P
22.47	Appliance intended to be connected water mains shall withstand the water pressure expected in norm use.	Not Connected water mains	N
22.48	Appliance intended to be connected water mains shall be constructed to prevent back siphonage of non-potable water into water mains.		N
22.101	Appliances intended to be fixed shall be so designed that they can be securely fixed and maintained in position.		P
22.102	Appliances provided with supplementary heaters		N

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Clause	Requirement – Test	Result - Remark	Verdict
22.102.1	Appliances provided with supplementary heaters for air shall be provided with at least two thermal cut-outs. The thermal cut-out intended to operate first shall be a selfresetting thermal cut-out, the other thermal cut-out shall be a non-self-resetting thermal cut-out.		P
22.102.2	Appliances provided with supplementary heaters for water shall incorporate a non-self-resetting thermal cut-out, providing all-pole disconnection that operates separately from water thermostats.		P
22.102.3	Thermal cut-outs of the capillary type shall be so designed that the contacts open in the event of leakage from the capillary tube.		P
22.103	Non-self-resetting cut-outs shall be functionally independent of other control devices.		P
22.104	Containers of sanitary hot water heat pumps shall withstand the water pressure occurring in normal use.		N
22.105	In the case of closed containers of sanitary hot water heat pumps, the formation of an air or vapour cushion of more than 2 % of the capacity, but not more than 10 % as a maximum, shall be provided.		N
22.106	Pressure relief devices, whether incorporated in the container of sanitary hot water heat pumps or supplied separately, shall prevent the pressure in the container from exceeding the permissible excessive operating pressure by more than 0,1 MPa.		N

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Clause	Requirement – Test	Result - Remark	Verdict
22.107	The outlet system of open containers of sanitary hot water heat pumps shall be free from obstructions that could limit the water flow to such an extent that the pressure in the container would exceed the permissible excessive operating pressure.		N
22.108	Storage tanks of sanitary hot water heat pumps shall be resistant to vacuum pressure impulses which may occur in normal use.		N
22.109	Wiring connected to a non-self-resetting thermal cut-out designed to be replaced after its operation shall be so secured that replacement of the thermal cut-out itself or to a heating element assembly on which the thermal cut-out is mounted, will not damage other connections or internal wiring.		N
22.110	Non-self-resetting thermal cut-outs designed to be replaced after their operation shall open the circuit in the intended manner without short-circuiting live parts of different potential and without causing live parts to come into contact with the enclosure.		N
22.111	It shall not be necessary to manually reset any thermostat after power supply interruption during the operation of the appliance.		N
22.112	The construction of the refrigerating system shall comply with the requirements of Section 3 of ISO 5149		N
22.113	When a flammable refrigerant is used, refrigerant tubing shall be protected or enclosed to avoid mechanical damage. The tubing shall be protected to the extent that it will not be handled or used for carrying during moving of the product.		N

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Clause	Requirement – Test	Result - Remark	Verdict
22.114	When a flammable refrigerant is used, low temperature solder alloys, such as lead/tin alloys, are not acceptable for pipe connections.		N
22.115	The total refrigerant mass (M) of all refrigerating systems within the appliance employing flammable refrigerants, shall not exceed m3 as defined in Annex GG.		N

23.	INTERNAL WIRING		P
23.1	Wire always smooth and free from sharp edges	The wire are smooth and free from sharpness	P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well rounded or provided with bushings		P
	Wiring effectively prevented from coming into contact with moving parts		P
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges or corners	No beads	N
	Beads inside flexible metal conduits contained within an insulating sleeve, unless the conduits can not move in normal use		N
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		P
	Flexible metallic tubes not causing damage to inside of insulation of conductors	No such tubes	N
	Open-coil springs not used to protect wiring		N
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N

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Clause	Requirement – Test	Result - Remark	Verdict
	Flexing wiring test when wiring is supplied at rated voltage and under normal operation. The appliance show no damage in accordance with this standard.		P
	--10000, for conductor flexed during normal use		P
	--100,for conductor flexed during user maintenance		P
	After flexing wiring test, electric strength test, 1000V between live parts and metal parts is tested		P
23.4	Bare internal wiring sufficiently rigid and fixed		N
23.5	The insulation of internal wiring withstanding the electrical stress likely to occur in normal use		P
	Insulation electric stress test for: 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 positive means		N
23.7	Only the colour combination green/yellow used for earthing conductors		P
23.8	Aluminium wires not used for internal wiring	Copper	P
23.9	No lead-tin soldering of stranded conductors where they are subject to contact pressure, unless clamping means so constructed that there is no risk of bad contact due to cold flow of the solder		P
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for connection of an appliance to the water mains, shall be at least equivalent to light PVC sheathed flexible cord.		P

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Clause	Requirement – Test	Result - Remark	Verdict
24.	COMPONENTS		P
24.1	Components comply with safety requirements in relevant IEC standards, otherwise they must be tested in accordance with 24.1.1 to 24.1.6.	All components comply with safety requirements	P
24.1.1	Capacitors likely to be permanently subjected to the supply mains voltage and used for radio interference suppression or for voltage dividing is IEC 60384-14. Otherwise they must be tested in accordance with annex F.		P
24.1.2	The relevant standard for safety isolating transformers is IEC 61558-2-6. Otherwise they must be tested in accordance with annex G		N
24.1.3	The relevant standard for switch is IEC 61058-1. Otherwise they must be tested in accordance with annex H		P
	Addition: For switches operating during the test of 19.112, the number of cycles of operation is 300.		P
24.1.4	For thermostats of liquid-filled radiators that operate during the test of Clause 11 to limit the surface temperature rise to 85 K, the number of cycles of operation is increased to 100 000.		N
	For self-resetting thermal cut-outs, the number of cycles of operation is increased to 3 000.		N
	For non-self-resetting thermal cut-outs operating during the test of 19.112, the number of cycles of operation is increased to 300.		N
	For other non-self-resetting thermal cut-outs, the number of cycles of operation is increased to 1000		N
24.1.5	The relevant standard for appliance couplers is IEC 60320-1.		P
24.1.6	The relevant standard for small lampholders is IEC 60238.	No lampholder	N

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Clause	Requirement – Test	Result - Remark	Verdict
24.2	No switches or automatic controls in flexible cords		N
	No devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		N
	No thermal cut-outs which can be reset by soldering		N
24.3	Switch intended for all-pole disconnection of stationary appliances is directly connected to the supply terminals, having a contact separation of at least 3 mm in each pole		N
24.4	Plugs and socket-outlets for heating elements and extra-low voltage circuits, not interchangeable with plugs and socket-outlets .		N
24.5	Capacitor in auxiliary windings of motors shall be marked with rated voltage and rated capacitance shall be used with these markings.		N
24.6	Motors connected to the supply mains and having inadequate basic insulation for the rated voltage of the appliance, shall not exceed 42V.		N
24.7	Hose-sets for the connection of appliances to the water mains shall comply with IEC 61770.	No such hose-sets be used	N
24.101	Thermal control devices incorporating replaceable parts shall be marked in such a way that the replaceable parts can be identified. The replacement part shall be marked accordingly.		P

25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		P
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		N
	- supply cord fitted with a plug		N

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Clause	Requirement – Test	Result - Remark	Verdict
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance		N
	- pins for insertion into socket-outlets		N
	Appliances incorporating an appliance inlet, other than those standardized in IEC 60320-1, shall be supplied with a cord set		N
25.2	Appliances other than stationary appliances not provided with more than one means of connection to the supply	One means of connection used	P
	Stationary appliance for multiple supply may be provided with more than one means of connection, if adequately insulation provided form each other		N
	Electric strength test of 1250 V for 1 min between each means of connection, no breakdown shall occur		P
25.3	Connection of supply wires for appliance intended to be permanently connected to fixed wiring possible after the appliance has been fixed to its support		P
	Appliance provided with a set of terminals for the connection of cables or fixed wiring, cross-sectional areas specified in 26.6		P
	Appliance provided with a set of terminals allowing the connection of a flexible cord		P
	Appliance provided with a set of supply leads accommodated in a suitable compartment		P
	Appliance provided with a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate type of cable or conduit		P

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Clause	Requirement – Test	Result - Remark	Verdict
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimensions according to table 10		P
	Introduction of conduit or cable does not affect the protection against electric shock or reduce creepage distances and clearances below values specified in clause 29		P
25.5	Method for assemble supply cord with the appliance:		N
	- type X attachment		N
	- type Y attachment		N
	- type Z attachment, if allowed in relevant part 2		N
	Type X attachment, other than those having a specially prepared cord, shall not be used for flat twin tinsel cord		N
	Type Z attachment is allowed for egg boilers, feeding-bottle heaters, steam sterilizers, yoghurt makers and stands of cordless kettles		N
25.6	Plugs fitted with only one flexible cord		N
25.7	Appliance supply cord not lighter than:		-
	- braided cord		N
	- ordinary tough rubber sheathed cord		N
	- ordinary polychloroprene sheathed flexible cord		N
	- flat twin tinsel cord		N
	- light polyvinyl chloride sheathed cord ,for appliance not exceeding 3 kg		N
	- ordinary polyvinyl chloride sheathed cord, for appliance exceeding 3 kg		N
	If temperature rise of external metal parts exceeding 75 K, PVC cord not used	Not exceed	N

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Clause	Requirement – Test	Result - Remark	Verdict
	--the special condition for PVC cord is used: appliance so constructed that the supply cord is not likely to touch external metal parts in normal use		N
	-- the special condition for PVC cord is used: PVC supply cord appropriate for higher temperatures, type Y or type Z attachment used		N
	The supply cord of livestock feed boilers shall be polychloroprene sheathed		N
	Supply cords shall be polychloroprene sheathed and be not lighter than heavy polychloroprene-sheathed flexible cord (code designation 60245 IEC 66).		N
25.8	Actual cross-sectional area of supply cords not less than the value according to table 11		N
	Portable appliances having a rated current up to 10 A may incorporate a supply cord having a nominal cross-sectional area of 0,75 mm ² , if the length is less than 2 m		N
25.9	Supply cord not in contact with sharp points or edges		N
25.10	Green/yellow core for earthing purposes in Class I appliance		P
25.11	Conductors of supply cords not consolidated by lead-tin soldering where they are subject to contact pressure		N
25.12	Moulding the cord to part of the enclosure does not damage the insulation of the supply cord		P
25.13	Inlet opening provided with a bushing, or is so constructed, that there is no risk of damage to the supply cord when introduced		P

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Clause	Requirement – Test	Result - Remark	Verdict
25.14	Supply cords that are moved while in operation shall be adequately protected against excessive flexing where it enters the appliance.		P
25.15	Conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorages	Pull force of 100N, torque of 0.35Nm	P
25.16	Cord anchorages for type X attachments so constructed and located that:		N
	- replacement of the cord is easily possible		N
	- it is clear how the relief from strain and the prevention of twisting are obtained		N
	- they are suitable for different types of cord		N
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless separated from accessible metal parts by supplementary insulation		N
	- the cord is not clamped by a metal screw which bears directly on the cord		N
	- at least one part of the cord anchorage securely fixed to the appliance, unless part of a specially prepared cord.		N
	-Screws which have to be operated when replacing the cord do not fix any other component. However, this does not apply if ----if removal of screws the appliance becomes inoperative ----or they cannot be removed without aid of tool.		N
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N

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Clause	Requirement – Test	Result - Remark	Verdict
	- for Class 0, 0I and I appliances: they are of insulating material or are provided with an insulating lining, unless a failure of the insulation of the cord does not make accessible metal parts live		N
	- for Class II appliances: they are of insulating material, or if of metal, they are insulated from accessible metal parts by supplementary insulation		N
	Screws tighten test on conductor, after test the conductors shall not have moved by more than 1mm in the terminals.		P
25.17	Adequate cord anchorages for type Y and Z attachment		N
25.18	Cord anchorages only accessible with the aid of a tool, or so constructed that the cord only can be fitted with the aid of a tool		N
25.19	Type X attachment, glands not used as cord anchorage in portable appliances. Tying the cord into a knot or tying the cord with string not used		N
25.20	Conductors of the supply cord for type Y and Z attachment adequately additionally insulated		N
25.21	Space for supply cable for fixed wiring or supply cord for type X attachment constructed to permit checking of conductors with respect to correct positioning and connection before fitting any cover, no risk of damage, no contact with accessible metal part if a conductor becomes loose, etc.		N
25.22	Appliance inlet shall:		-
	- live parts not accessible during insertion or removal		N

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Clause	Requirement – Test	Result - Remark	Verdict
	- connector can be inserted without difficulty		N
	-the appliance is not supported by the connector		N
	--not be an appliance inlets for cold conditions if temperature rise of external metal parts exceeds 75 K, unless the supply cord is not likely to touch such metal parts;		N
25.23	Interconnection cords comply with the requirements for the supply cord, except as specified		P
25.24	Interconnection cords not detachable without the aid of a tool		P
25.25	The dimensions of pins of appliances that are inserted into socket-outlets shall be compatible with the dimensions of the relevant socket-outlets.		P
26	TERMINALS FOR EXTERNAL CONDUCTORS		P
26.1	Appliances shall be provided with terminals or equally effective device for the connection of external conductors.		P
26.2	Terminals for type X attachment and appliances for connection to fixed wiring shall be provided with terminals in which the connections are made by means of screws, nuts or similar device unless the connections are soldered.		N
26.3	Terminals for type X attachment and those for connection to fixed wiring shall be constructed so that they clamp the conductor between metal surfaces with sufficient contact pressure but without causing damage to the conductor.		N

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Clause	Requirement – Test	Result - Remark	Verdict
26.4	Terminals for type X attachment, except type X attachment having a special prepared cord, and terminals for connection to fixed wiring, shall not require special preparation of the conductor.		N
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 between live parts and accessible metal parts,		N
	The stranded conductor test is carried out, and after the test it shall be no contact between live parts and accessible metal parts.		N
26.6	Terminals for type X attachment and for connection to fixed wiring shall allow the connection of conductors having the nominal cross-sectional areas		N
26.7	Terminals for type X attachment shall be accessible after removal of a cover or part of enclosure.		N
26.8	Terminals for the connection to fixed wiring located close to each other, including the earthing terminal		P
26.9	Terminals of the pillar type shall be constructed and located so that the end of a conductor introduced into the hole is visible, or can pass beyond the threaded hole for a distance equal to half the nominal diameter of screw but at least 2.5mm.		P
26.10	Terminals with screw clamping and screwless terminal shall not be used for connection of the conductor of flat twin tinsel cords unless the ends of the conductors are fitted with means suitable for use with screw terminals.		P

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Clause	Requirement – Test	Result - Remark	Verdict
	Pull of 5N test to the connection and show no damage.		P
26.11	For appliance with type Y attachment or type Z attachment, soldered and welded, crimped or similar connection may be used for connection of external conductors.		N
	And for Class II construction, the conductor shall be positioned or fixed so that soldering and crimping or welding alone to maintain the conductor in position.		N
27	PROVISION FOR EARTHING		P
27.1	Accessible metal parts of Class 0I and I appliances, permanently and reliably connected to an earthing terminal		P
	Earthing terminals and earthing contacts shall not be connected to neutral terminal		P
	Class 0, II and III appliance have no provision for earthing		N
	SELV circuit shall not be earthed unless they are protective ELV circuit.		N
27.2	The clamping means of earthing terminals shall be adequately secured against accidental loosening.		N
	Terminals used for the connection of external equip potential bonding conductors allow connection of conductors of 2,5 to 6 mm ² ,		N
27.3	For appliance with supply cords, the arrangement of the terminals, or the length of the conductor between the cord anchorage and the terminals, shall be such that current carrying conductors become taut before earthing conductor		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
27.4	No risk of corrosion resulting from contact between metal of earthing terminal and other metal		P
	Parts of steel providing earthing continuity provided at the essential areas with an electroplated coating, thickness at least 5 µm		N
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N
	In case of aluminium alloys precautions taken to avoid risk of corrosion resulting from contact between copper and aluminium or its alloys.		N
27.5	The connection between earthing terminal and earthed metal parts shall have a low resistance		P
	If the clearance of basic insulation in a protective ELV circuit is based on rated voltage of the appliance, this requirement dose not applies to connections providing earthing continuity in the protective ELV.		N
	The test of earthing of ELV circuit, the resistance shall not exceed 0.1Ω		N
27.6	The printed conductors of printed circuit boards shall not be used to provide earthing continuity in hand held appliances		N
	- at least two tracks are used with independent soldering points and the appliance complies with requirements of 27.5 for each circuit;		N
	- the material of the printed circuited board complies with IEC 60249-2-4 or IEC 60249-2-5		N
28.	SCREWS AND CONNECTIONS		P
28.1	Fixings and electrical connections and		N

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	connections providing earthing continuity shall withstand mechanical stresses		
	Screws shall not be metal which is soft or liable to creep, such as zinc or aluminium		P
	Screws used for electrical connections or for connections providing earthing continuity shall screw into metal		P
	Screws shall not be of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation	No insulating material used	P
	Torque for testing screws and nuts after the test		P
28.2	Contact pressure not transmitted through insulating material which are liable to shrink or distort		P
	This requirement does not apply to electrical connections in circuits carrying a current not exceeding 0.5A.		N
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp these parts together.		N
	Thread-cutting (self-tapping) screws not used for electrical connections, unless generating 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 unless the thread is formed by a swaging action		P
	Thread-cutting and space-threaded screws used provide earthing continuity: it is not necessary to disturb the connection in normal use, and at least two screws are used for each connection.		P
28.4	Screws and nuts shall be secured against		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	loosening for safety requirement		
	Rivets for electrical connections subject to torsion secured against loosening		P

29.	CLEARANCES, REEPAGE DISTANCES AND SOLID INSULATION		P
29.1	The clearance of basic insulation shall withstand sufficient electrical stress.		P
29.1.1	Basic insulation shall be sufficient to withstand overvoltage.		P
	The clearance at the terminals of tubular sheathed heating element may be reduced to 1mm if the microenviroment is pollution degree 1.		N
	Lacquered conductors of windings are assumed to be bare conductors but clearance may be reduced to 0.5mm for rated impulse voltage at 1500V.		N
29.1.2	Clearance of supplementary insulation shall be not less than table 16.		P
29.1.3	Clearance of reinforce insulation shall be not less than the value of basic insulation using the next higher step for rated impulse voltage		P
29.1.4	For function insulation, table 16 is applicable		P
29.1.5	For appliance have a higher working voltage than rated voltage		N
29.2	Creepage distance shall not be less than those appropriate for the working voltage.		P
	Taking account pollution degree 2.		P
	--Unless precaution has been taken to protect the insulation, in which case pollution degree 1 applies.		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	--Unless the insulation is subjected to conductive pollution, in which case pollution degree 3 applies.		N
	Parts, such as hexagonal nuts that can be tightened to different positions during assembly, and movable parts, are placed on most unfavorable position.		P
	A force is applied to conductor, other than heating elements, and try to reduce clearance when making the measurement for -2N, for bare conductor -30N, for accessible surface.		P
29.2.1	Creepage distance of basic insulation shall not less than those specified in table 17.		P
29.2.2	Creepage distance of supplementary insulation shall not less than those specified in table 17.		P
29.2.3	Creepage distance of reinforced insulation shall not less than those specified in table 17.		P
29.2.4	Creepage distance of function insulation shall not less than those specified in table 18.		P
29.3	The supplementary insulation and reinforced insulation shall have enough thickness.		P
29.3.1	Min. thickness of the insulation: 1mm for supplementary insulation 2mm for reinforced insulation		P
29.3.2	Each layer of material shall withstand the electrical strength of 16.3 for supplementary insulation		P
29.3.3	Dry heat test for 48h and the temp rise meet the requirement		P
30.	RESISTANCE TO HEAT, FIRE		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
30.1	Relevant external parts of non-metallic material shall be sufficient resistance to heat		P
	Parts supporting live parts and parts providing supplementary or reinforced insulation sufficiently resistant to heat		P
	The requirement does not apply to the insulation or sheath of flexible cords or internal wiring.		N
	Resistance to heating test, and after test appliance show no fault.		P
30.2	Parts of non-metallic material shall be resistance to ignition and spread of fire		P
30.2.1	Glow-wire test at 650°C		P
30.2.2	Glow-wire test at 750 °C for current exceed 0.5A		N
	Glow-wire test at 650 °C for other		N
30.2.3	Appliance be operated while unattended are tested		N
30.2.3.1	Current exceed 0.2A, and insulation with 3mm distance shall have a glow-wire test at 850°C		N
30.2.3.2	Insulation supporting and insulation with 3mm distance shall have glow-wire test		P
	775°C for current exceed 0.2 A		N
	675°C for other		N
	If a flame persist long than 2s, then needle-flame test is carried out.		N
30.2.4	Requirement of PCB for needle-flame is tested.		N
	Compliance is checked by inspection and by subjecting the enclosure of the appliance to the needle-flame test of Annex E.		P

EN 60335-1+EN 60335-2-40			
Clause	Requirement – Test	Result - Remark	Verdict
	The needle-flame test is not carried out on material classified as V-0 or V-1 according to IEC 60695-11-10, provided that the test sample was no thicker than the relevant part.		P
31.	RESISTANCE TO RUSTING		P
	Relevant ferrous parts adequately protected against rusting		P
32.	RADIATION, TOXICITY AND SIMILAR HAZARDS		P
	Appliance does not emit harmful radiation		P
	Appliance does not present a toxic or similar hazard		P

EN 62233			
Clause	Requirement – Test	Result - Remark	Verdict

EMF TEST		
Requirement & Testing	Remark	Verdict
Measuring method 4.2.4.1: (time domain evaluation)		P
Measuring method 4.2.4.2: (line spectrum evaluation)		N
Measuring method 4.2.4.3: (simplified test method)		N
Measuring distance (cm):	30.	P
Sensor location:		P
Operation conditions:		P
Magnetic flux density (maximum)(μ T):	1.061	P
If the measured value exceeds the reference level, the value is weighted with coupling factor:		N
Coupling factor:		P
Test result		P

10.1	TABLE: Power input deviation					P
Input deviation of/at:		P rated (W)	P measured (W)	ΔP	Required ΔP	Remark
230V~		605	589	-2.6%	+15%	P
Supplementary information: N/A						

11.8	TABLE: temperature rise measurements		P
	MOTOR-OPERATED APPLIANCES	1.06x240V=254.4V	--
Thermal test (Normal operation)			
Temperature rise dT of part/at:		Measured temperature dT(k)	Limit dT (K)
		254.4V	
Internal wire		43.2	80
PCB near IC		48.7	For CL30
Enclosure		12.1	REF
Note:			
1. The ambient temperature during this test was 23.5-23.7°C;			
2. The value of dT is calculated under the condition the temperature of ambient considered as 25°C			

TABLE 13	LEAKAGE CURRENT AND ELECTRIC STRENGTH MEASUREMENTS AT OPERATING TEMPERATURE		P
Leakage current between:		Current (mA)	Required Current (mA)
Input to enclosure		0.05	3.5
Leakage voltage applied between:		Test voltage (V)	Break down Yes/No
Input to enclosure		1000	No

TABLE 16	LEAKAGE CURRENT AND ELECTRIC STRENGTH MEASUREMENTS AFTER HUMIDITY TREATMENT		P
Leakage current between:		Current (mA)	Required Current (mA)
Input to enclosure		0.04	3.5
Leakage voltage applied between:		Test voltage (V)	Break down Yes/No
Input to enclosure		1250	No

19	Abnormal operation conditions						P
Operational characteristics		YES/NO	Operational conditions				
Are there electronic circuits to control the appliance operation?		NO					
Are there "off" or "stand-by" position?		NO					
The unintended operation of the appliance results in dangerous malfunction?		NO					
Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result
19.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.7	Refer to clause 19.7	No hazards	N/A	N/A	N/A	N/A	P
19.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.11.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.11.4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.10X	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Supplementary information:							

TABLE:24.1	list of critical components			P
Object/ part No.	Manufacturer/ trademark	Type/ model	Technical data	Mark(s) of conformity
Enameled wire	Dongguan Yida Industry Co., Ltd.	QZ-2	Φ0.44/Φ0.35mm	VDE

29.1	TABLE: Clearances	P
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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	>3.0	--	>3.0	P
4 000	3,0 / 3,5***	--	--	>5.0	--	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						

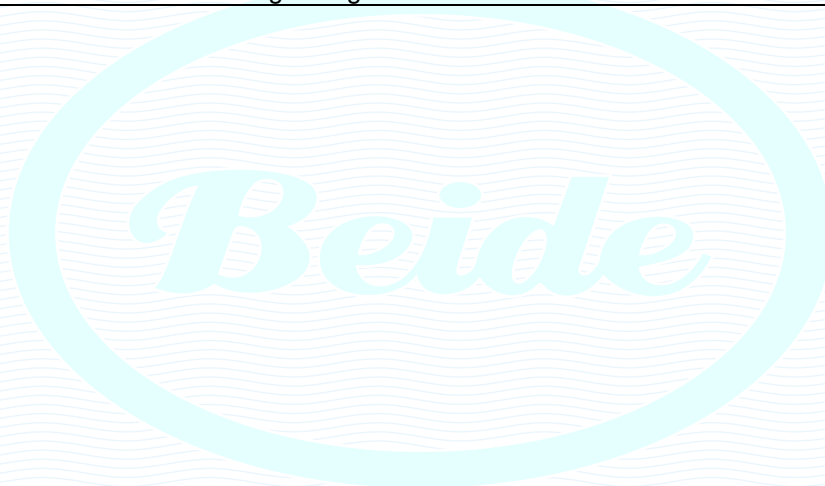
29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V)	Creepage distance (mm)										
	Pollution degree										
	1	2			3			Type of insulation			
	Material group				Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb ^{*)}	B ^{**)}	S ^{**)}	R ^{**)}	Verdict
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—	—	—	N/A
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—	—	—	N/A
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—	—	—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—	—	N/A
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0	>4.0			P
250	0,56	1,25	1,8	2,5	3,2	3,6	4,0		>4.0		P
250	1,12	2,5	3,6	5,0	6,4	7,2	8,0			>7.0	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

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



30	TABLE:Resistancetoheatandfire																P	
Object/ partNo.	Ballpressuretest °C				Glowwiretest (GWT)°C				Glow-wire flammabilityindex (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									
PCB		0.2			X													P
Supplementaryinformation:																		

Appendix 1

Whole views of EUT





Appendix 2

Product marking of EUT

Cabinet Air Conditioner

Model : SAD115-2

Rating : 220-240V~,50Hz,2.75A,605W



Suzhou Langji Technology Co., Ltd.

Workshop No. 3, No. 58, Tongxin Road, Tongan Town,
High-Tech Zone, Suzhou, Jiangsu Province, China

MADE IN CHINA



Appendix 3

Model list

SAD115-2, BIMS080AX, BIMS100AX, BIMS120AX, BIMS140AX, BIMS160AX, BIMS180AX, BIMS200AX, BIMS220AX, BIMS240AX, BIMS260AX, BIMS280AX, BIMS300AX, BIMS320AX, BIMS340AX, BIMS360AX, BIMS380AX, BIMS400AX, BIMS420AX, BIMS440AX, BIMS480AX, BIMS500AX, BIMS520AX, BIMS540AX, BIMS560AX, BIMS583AX, BIMS600AX, BIMS620AX, BIMS640AX, BIMS660AX, BIMS080AXA, BIMS120AXA, BIMS140AXA, BIMS160AXA, BIMS180AXA, BIMS200AXA, BIMS220AXA, BIMS240AXA, BIMS260AXA, BIMS280AXA, BIMS300AXA, BIMS320AXA, BIMS340AXA, BIMS360AXA, BIMS380AXA, BIMS400AXA, BIMS420AXA, BIMS440AXA, BIMS460AXA, BIMS480AXA, BIMS500AXA, BIMS520AXA, BIMS540AXA, BIMS560AXA, BIMS580AXA, BIMS600AXA, BIMS620AXA, BIMS640AXA, BIMS080BST, BIMS100BST, BIMS120BST, BIMS140BST, BIMS160BST, BIMS180BST, BIMS200BST, BIMS220BST, BIMS240BST, BIMS260BST, BIMS280BST, BIMS300BST, BIMS320BST, BIMS200ASA, BIMS220ASA, BIMS240ASA, BIMS260ASA, BIMS280ASA, BIMS300ASA, BIMS320 ASA, BIMS100AHT, BIMS125AHT, BIMS140AHT, BIMS160AHT, BIMS180AHT, BIMS180AHTA, BIMS80AHR, BIMS100AHR, BIMS112AHR, BIMS125AHR, BIMS140AHR, BIMS160AHR, BIMS200AHRA, BIMS224AHRA, BMCF028AB, BMCF036AB, BMCF045AB, BMCF050AB, BMCF056AB, BMCF063AB, BMCF071AB, BMCF080AB, BMCF090AB, BMCF100AB, BMCF112AB, BMCF125AB, BMCF140AB, BMCF160AB, BMCS028A, BMCS036A, BMCS045A, BMCS056A, BMCS071A, BMCS080A, BMCS090A, BMCS100A, BMCS112A, BMCS125A, BMCS140A, BMCD028A, BMCD036A, BMCD045A, BMCD056A, BMCD071A, BMCD080A, BMCD090A, BMCD100A, BMCD112A, BMCD125A, BMCD140A, BMVX028A, BMVX036A, BMVX056A, BMVX071A, BMVX090A, BMVX112A, BMVX125A, BMVX140A, BMVW028AB, BMVW036AB, BMVW040AB, BMVW056AB, BMVW063AB, BMVW071AB, BMDN022AB, BMDN025AB, BMDN028AB, BMDN032AB, BMDN036AB, BMDN040AB, BMDN045AB, BMDN050AB, BMDN056AB, BMDN063AB, BMDN071AB, BMDN080AB, BMDN090AB, BMDN100AB, BMDN112AB, BMDN125AB, BMDN140AB, BMDN160AB, BMDN022AC, BMDN025AC, BMDN028AC, BMDN032AC, BMDN036AC, BMDN040AC, BMDN045AC, BMDN050AC, BMDN056AC, BMDN063AC, BMDN071AC, BMDH100AB, BMDH112AB, BMDH125AB, BMDH140AB, BMDH200BI, BMDH250BI, BMDH335BI, BMDH400BI, BMDH450BI, BMDH500BI, BMDH560BI, BMDH615BI, BMDF175A-022, BMDF210A-020, BMDF250A-015, BMDF250A-020, BMDF250A-030, BMDF300A-020, BMDF400A-020, BMDF400A-030, BMDF500A-020, BMDF500A-030, BMDF600A-020, BMDF600A-030