Test Report issued under the responsibility of:

TEST REPORT
IEC 60335-1
Safety of household and similar electrical appliances

Report Number. .....:	130401492SHA-001
Date of issue .....:	2013-08-13
Total number of pages.....	130
Applicant's name.....:	GlobTek, Inc.
Address .....:	186 Veterans Dr. Northvale, NJ 07647 USA
Test specification:	
Standard .....:	IEC 60335-1:2010 (Fifth Edition) Including group differences for CENELEC (EN60335-1: 2012)
Test procedure .....:	CB Scheme
Non-standard test method……..:	N/A
Test Report Form No.....:	IEC60335_1R
Test Report Form(s) Originator.....:	Nemko AS
Master TRF.....:	Dated 2012-03

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.

Test item description .....:	Building-in power supply (Limited use for House Hold products only)
Trade Mark .....:	GlobTek
Manufacturer.....:	Same as applicant
Model/Type reference .....:	GT*93021-*** -*2 The 1st "*" can be "M" or "-"or "H" for market identification and not related to safety. The 2nd "*" denote the rated output wattage designation, which can be "01" to "20", with interval of 1. The 3rd "*" denote the standard rated output voltage designation, which can be "07", "09", "15", "24", "36". The 4th "*" is optional deviation, subtracted from standard output voltage, which can be "-0,1" to "-11,9" with interval of 0,1, or blank to indicate no voltage different. The 3rd and 4th "**" together denote the output voltage, with a range of 5- 36 volts. The last "*" can be P or T or D, the model name with P denotes connected by wires, with T denotes connected by terminal block, with D denotes connected by metal pin. (See below table for detailed models)
Ratings .....:	Class II, t_a: 50°C Input: 100-240V~, 50-60Hz, 0,6A max.; Output: 5-36VDC, 20W max. (See below table for detailed ratings)

Model	Output Voltage	Max. output current	Max. output power
GT*93021-*07-*2	5-7V	3A	18W
GT*93021-*09*-*2	7,1-9V	2,8A	20W
GT*93021-*15*-*2	9,1-15V	2,2A	20W
GT*93021-*24*-*2	15,1-24V	1,32A	20W
GT*93021-*36*-*2	24,1-36V	0,83A	20W

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	Intertek Testing Services Shanghai.	
Testing location/ address .....:		Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China	
☐	**Associated CB Laboratory:**		
Testing location/ address .....:			
	Tested by (name + signature).....:	Will Wang	Will Wang
	Approved by (name + signature)...:	Susanna Xu	
☐	**Testing procedure: TMP**		
Testing location/ address .....:			
	Tested by (name + signature).....:		
	Approved by (name + signature)...:		
☐	**Testing procedure: WMT**		
Testing location/ address .....:			
	Tested by (name + signature).....:		
	Witnessed by (name + signature)..:		
	Approved by (name + signature)...:		
☐	**Testing procedure: SMT**		
Testing location/ address .....:			
	Tested by (name + signature).....:		
	Approved by (name + signature)...:		
	Supervised by (name + signature):		
☐	**Testing procedure: RMT**		
Testing location/ address .....:			
	Tested by (name + signature).....:		
	Approved by (name + signature)...:		
	Supervised by (name + signature):		

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

Appendix no. 1: COMMON MODIFICATIONS FOR EN60335-1: 2012 (group differences for CENELEC), from page 73 to page 79, total 7 pages.

Appendix no. 2: Photos, from page 112 to page 130, total 19 pages.

Summary of testing:

Tests performed (name of test and test clause):

Marking Durability Test	7.14
Protection against Access to Live Parts	8.1.1 & 8.1.2
User Accessible Voltage and Current Test, Working voltage test	8.1.4& 22.42
Power Input	10.1 & 10.2
Heating Test	11.8
Leakage Current Test	13.2
Electric Strength Test	13.3
Humidity Test	15.3
Leakage Current Test	16.2
Electric Strength Test	16.3
Overload/ Short-Circuit Test	17
Abnormal Operation –Fault Conditions of Electronic Circuit	19.11& 19.12& 19.14
Stability Test	20.1
Mechanical Strength	21.1
Strength of Accessible Parts of Solid Insulation	21.2
Plug Discharge Test	22.5
Insulation of Internal Wiring Test	23.5
Creepage Distance and Clearance	29
Ball Pressure Test	30.1
Glow Wire Test	30.2.1 & 30.2.3
EMF Test	32

Testing location:
Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China

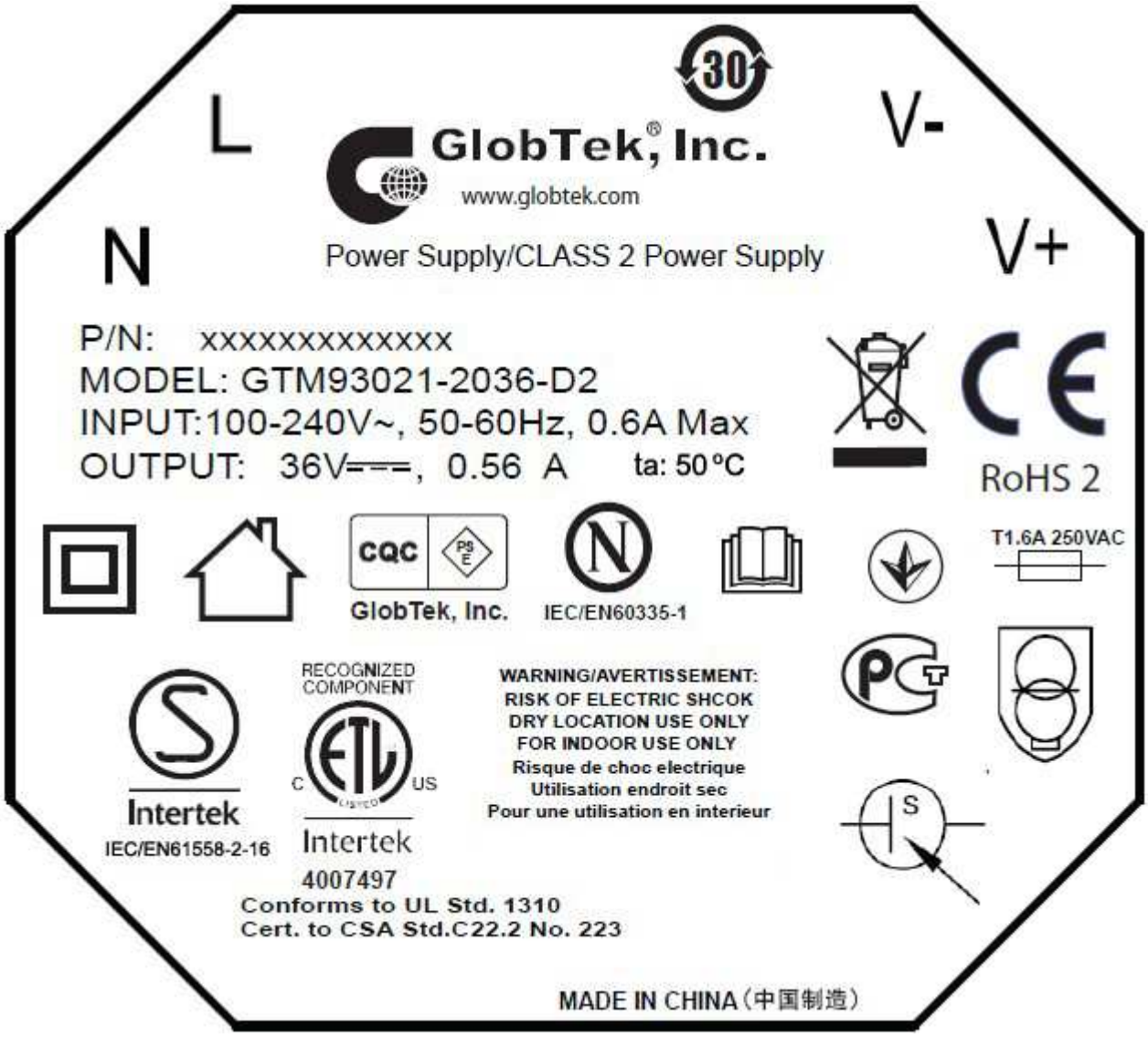
Summary of compliance with National Differences

List of countries addressed:

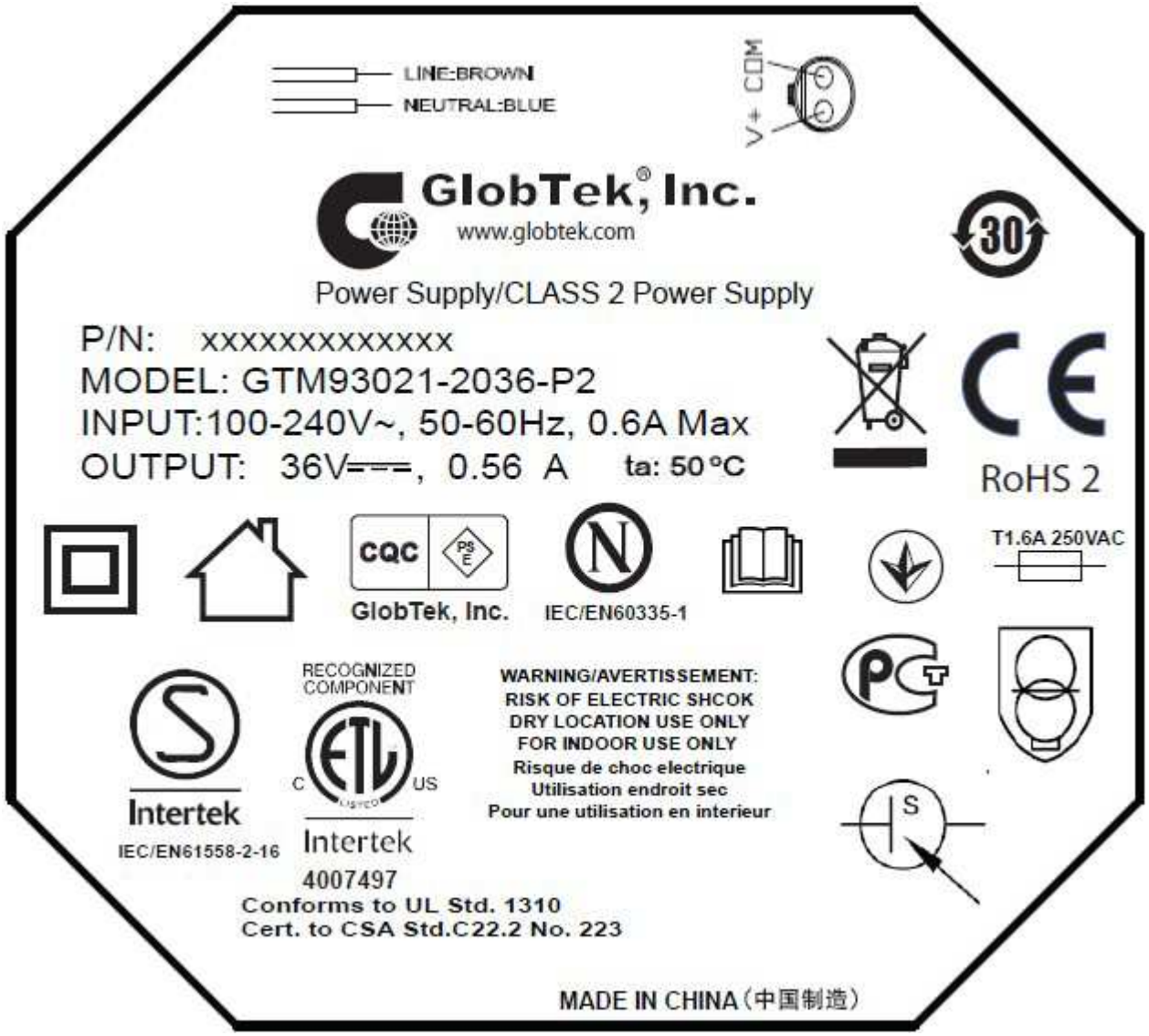
Group differences for CENELEC (EN60335-1: 2012) are considered.

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Note: Other models of GT*93021-***-D2 and all models of GT*93021-***-T2 are with similar label as GTM93021-2036-D2 except different model name and output ratings.



Note: Other models of GT*93021-***-P2 are with similar label as GTM93021-2036-P2 except different model name and output ratings.

Test item particulars ..... :	
Classification of installation and use ..... :	Class II for built-in installation
Supply Connection..... :	Terminal block for GT*93021-*** -T2; Wiring for GT*93021-*** -P2; Solid pins for GT*93021-*** -D2
..... :	
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 .....:	**2013-05-24**
Date (s) of performance of tests.....:	**2013-05-24 to 2013-06-28**
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.** **Model GTM93021-1507-2.0-P2, GTM93021-2009-P2, GTM93021-2024-P2 and GTM93021-2036-P2 were tested as typical models. Heating tests for terminal blocks were also performed on model GTM93021-1507-2.0-T2, GTM93021-2009-T2, GTM93021-2024-T2 and GTM93021-2036-T2 for evaluation.** **Once the relevant part 2 is published, the original certificate and test report needs to be recalled and retesting done for the part 2.**	
Manufacturer's Declaration per sub-clause 6.2.5 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).....:	**1.** GlobTek (Suzhou) Co., Ltd Building 4, No. 76 JinLing East Road, Suzhou Industrial Park, Suzhou, JiangSu, 215021, China **2.** GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 USA

General product information:

The products are power supplies limited use for household only.

Transformers used in all models are with same construction. The turns of secondary winding may be added or reduced according different output voltage.
All models have same PCB, but some non-critical components may be adjusted according different output voltage. The parameters of these components depend on output voltage.

The difference for GT*93021-*** -T2, GT*93021-*** -P2 and GT*93021-*** -D2 three series:
GT*93021-*** -T2 have two terminal blocks for input and output wiring. Relevant symbols for input and output such as “L”, “N”, “V+” and “V-” are marked on label near corresponding terminals;
GT*93021-*** -P2 have four lead wires for input and output wiring; Relevant symbols for input and output such as “LINE”, “NEUTRAL”, “V+” and “COM” are marked on label near corresponding wires;
GT*93021-*** -D2 have solid metal pins for input and output wiring, relevant indication marks near pins. Relevant symbols for input and output such as “L”, “N”, “V+” and “V-” are marked on label near corresponding terminals.

The products are not intended to use in environment which altitude exceed 5000m.
The products are intended to use in environment which ambient temperature is 50^{o}C.
The products are fully impregnated by epoxy resin. All internal components are enclosed except these wiring components.

The tests evaluated in this report were only based on component condition and some parts of products were not considered in this test report. Protection against Access to Live Parts, Heating Test, Leakage Current Test, Overload Test, Stability Test, Mechanical Strength and Strength of Accessible Parts of Solid Insulation shall be evaluated in end appliance again. Further tests may be under consideration if influences exist in end product, such as Ball Pressure Test if the heating tests get more severe results.

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		P
	Tests performed according to clause 5, e.g. nature of supply, sequence of testing, etc.		P
6	CLASSIFICATION		P
6.1	Protection against electric shock: Class 0, 0I, I, II, III..... .....:	Class II	P
6.2	Protection against harmful ingress of water	Built-in product, IPX0	P
7	MARKING AND INSTRUCTIONS		P
7.1	Rated voltage or voltage range (V)..... .....:	100-240V	P
	Symbol for nature of supply, or..... .....:	~	P
	Rated frequency (Hz) ....:	50-60Hz	P
	Rated power input (W), or ....:		N/A
	Rated current (A) ....:	0,6A	P
	Manufacturer's or responsible vendor's name, trademark or identification mark..... .....:	GlobTek	P
	Model or type reference..... .....:	GT*93021-***-*2	P
	Symbol IEC 60417-5172, for class II appliances		P
	IP number, other than IPX0..... .....:	Built-in product, IPX0	N/A
	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
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen	Supply voltage and frequency	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	Not adjustable	N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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	Only one rated voltage range	N/A
	the power input is related to the arithmetic mean value of the rated voltage range		N/A
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		P
	Symbol for class II appliances placed unlikely to be confused with other marking	Class II	P
	Units of physical quantities and their symbols according to international standardized system	No such symbols for physical quantities	N/A
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply, unless	Only two supply conductors and for one supply mains	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:		P
	- marking of terminals exclusively for the neutral conductor (letter N)	For GT*93021-***-T2 and GT*93021-***-D2	P
	- marking of protective earthing terminals (symbol IEC 60417-5019)	Class II power supply	N/A
	- marking not placed on removable parts		P
7.9	Marking or placing of switches which may cause a hazard	No switch	N/A
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means ....:	No switch	N/A
	This applies also to switches which are part of a control		N/A
	If figures are used, the off position indicated by the figure 0		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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	No adjustment controls	N/A
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance	No maintenance required	N/A
	The instructions state that:		P
	- the appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction		P
	- children being supervised not to play with the appliance		P
	For a part of class III construction supplied from a detachable power supply unit, the instructions state that the appliance is only to be used with the unit provided	Class II	N/A
	Instructions for class III appliances state that it must only be supplied at SELV, unless	Class II	N/A
	it is a battery-operated appliance, the battery being charged outside the appliance	Not battery-operated appliance	N/A
7.12.1	Sufficient details for installation supplied	See instruction	P
	For an appliance intended to be permanently connected to the water mains and not connected by a hose-set, this is stated	Not for water mains	N/A
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		P
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions state that the fixed wiring must be protected	No temperature rising higher than 50K	N/A
7.12.4	Instructions for built-in appliances:		P
	- dimensions of space		P
	- dimensions and position of supporting and fixing		P
	- minimum distances between parts and surrounding structure		P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- minimum dimensions of ventilating openings and arrangement		P
	- connection to supply mains and interconnection of separate components		P
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		P
	a switch complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord	Built-in appliances	N/A
	Replacement cord instructions, type Y attachment		N/A
	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	No non-self-resetting thermal cut-out	N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed	Built-in stationary appliances	N/A
7.12.8	Instructions for appliances connected to the water mains:		N/A
	- max. inlet water pressure (Pa) ....:	Not for connecting to water mains	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	P
7.14	Marking clearly legible and durable, rubbing test as specified		P
7.15	Markings on a main part	On the enclosure	P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool	Built-in stationary appliances	N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		P
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions	Portable appliances	N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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	No switches and controls	N/A
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link	No replaceable thermal link or fuse link	N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		P
8.1	Adequate protection against accidental contact with live parts	Built-in appliances, shall be evaluated in end product. Only the parts excluding wiring terminals were considered.	P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met	No removable lamps	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
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	P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N/A
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	Class II	N/A
8.1.4	Accessible part not considered live if:		P
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V		N/A
	- safety extra-low d.c. voltage: not exceeding 42.4 V	Max output voltage: 36,31VDC (GTM93021-2036-P2)	P
	- or separated from live parts by protective impedance		P
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0.7 mA	Max 0,134 mA peak (GTM93021-2036-P2)	P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 µF	0,0011 µF	P
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 µC		N/A
	- for peak values over 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:		P
	- built-in appliances	Double insulation provided	P
	- 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	Built-in appliances, shall be evaluated in end product. Only the parts excluding wiring terminals were considered.	P
	Only possible to touch parts separated from live parts by double or reinforced insulation	Built-in appliances, shall be evaluated in end product. Only the parts excluding wiring terminals were considered.	P
9	STARTING OF MOTOR-OPERATED APPLIANCES		N/A
	Requirements and tests are specified in part 2 when necessary		N/A
10	POWER INPUT AND CURRENT		P
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1..:		N/A
	Test carried out at upper an lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2.....:	(see appended table)	P
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless	100-240VAC	P
	the rated current is related to the arithmetic mean value of the range		N/A
11	HEATING		P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
11.1	No excessive temperatures in normal use	50°C ambient temperature was considered.	P
11.2	The appliance is held, placed or fixed in position as described.....:	Placed on wooden support. Further tests shall be considered in end product again.	P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless	Switching transformer	N/A
	the windings are non-uniform or it is difficult to make the necessary connections		P
11.4	Heating appliances operated under normal operation at 1.15 times rated power input (W) .....:		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V) .....:	106V and 254,4V	P
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage (V) .....:		N/A
11.7	Operation duration corresponding to the most unfavourable conditions of normal use		P
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 .....:	(see appended table)	P
	If the temperature rise of a motor winding exceeds the value of table 3, or	No motor	N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of Annex C are carried out		N/A
	Sealing compound does not flow out		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		P
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times the rated power input (W).....:		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Motor-operated appliances and combined appliances supplied at 1.06 times the rated voltage (V).....:	254,4V	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	Class II	P
	For other appliances, a low impedance ammeter may be used		N/A
	Leakage current measurements .....:	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4.....:	(see appended table)	P
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		N/A
	Appliances withstand the transient over-voltages to which they may be subjected	No transient overvoltage	N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6 .....:	(see appended table)	N/A
	No flashover during the test, unless		N/A
	of functional insulation if the appliance complies with clause 19 with the clearance short-circuited		N/A
15	MOISTURE RESISTANCE		P
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance	Built-in appliance. Considered as IPX0.	N/A
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A
	No trace of water on insulation which can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529.....:	IPX0	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	Not hand-held appliance	N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Built-in appliances installed according to the instructions		P
	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
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support, and		N/A
	for IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts subjected to the relevant treatment with the main part		N/A
	However, if a part has to be removed for user maintenance and a tool is needed, this part is not removed		N/A
15.2	Spillage of liquid does not affect the electrical insulation		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts are removed		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Overfilling test with additional amount of water, over a period of 1 min (l).....:		N/A
	The appliance withstands the electric strength test of 16.3		N/A
	No trace of water on insulation that can result in a reduction of clearances or creepage distances below values specified in clause 29		N/A
15.3	Appliances proof against humid conditions		P
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		P
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		P
	Humidity test for 48 h in a humidity cabinet	Temp.: 22ºC, R.H.: 93%	P
	Reassembly of those parts that may have been removed		N/A
	The appliance withstands the tests of clause 16		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		P
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		P
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1.06 times rated voltage (V) .....:	254,4V	P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by √3 (V) .....:		N/A
	Leakage current measurements .....:	(see appended table)	P
	Limit values doubled if:		N/A
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	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

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Clause	Requirement - Test	Result - Remark	Verdict
	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		N/A
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		P
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use .....:	(see appended table)	P
	Appliance supplied with 1.06 or 0.94 times rated voltage under the most unfavourable short-circuit or overload likely to occur in normal use (V) .....:	106 / 254,4 V, maximum input: 26,97W, 0,43A (GTM93021-1507-2.0-P2)	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	Max.Temperature rise of internal output wire: 48K < 70K	P
	Temperature of the winding not exceeding the value specified in table 8	Max.Temperature of the winding: 119°C	P
	However, limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
18	ENDURANCE		N/A
	Requirements and tests are specified in part 2 when necessary		N/A
19	ABNORMAL OPERATION		P
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe .....:	(see appended table)	P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and	No heating elements	N/A
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and	No such control	N/A
	if applicable, to the test of 19.5		N/A
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6	No PTC heating elements	N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable	No motor	N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11	No contactors or relays	N/A
	Appliances incorporating voltage selector switches subjected to the test of 19.15	No voltage selector switches	N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		N/A
	until steady conditions are established		P
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample	No heating element or intentionally weak part	N/A
19.2	Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0.85 times rated power input (W) .....:	No heating element	N/A
19.3	Test of 19.2 repeated; test voltage (V), power input of 1.24 times rated power input (W) .....:		N/A
19.4	Test conditions as in clause 11, any control limiting the temperature during tests of clause 11 short-circuited		N/A
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the sheath	No such component	N/A
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N/A
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions	No PTC heating elements	N/A
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures (V) .....:		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or	No rotor	N/A
	locking moving parts of other appliances		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, unless		N/A
	capacitor is of class P2 of IEC 60252-1		N/A
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed.....:		N/A
	Other appliances supplied with rated voltage for a period as specified .....:		N/A
	Winding temperatures not exceeding values specified in table 8.....:		N/A
19.8	Multi-phase motors operated at rated voltage with one phase disconnected	No motor	N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously	No motor	N/A
	Motor-operated and combined appliances for which 30.2.3 is applicable and that use overload protective devices relying on electronic circuits to protect the motor windings, are also subjected to the test		N/A
	Winding temperatures not exceeding values as specified .....:		N/A
19.10	Series motor operated at 1.3 times rated voltage for 1 min (V).....:	No motor	N/A
	During the test, parts not being ejected from the appliance		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless		P
	they comply with the conditions specified in 19.11.1		P
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless	No such component	N/A
	restarting does not result in a hazard		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4	No such switch	N/A
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		P
	During and after each test the following is checked:		P
	- the temperature of the windings do not exceed the values specified in table 8	No higher temperature	P
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		P
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		N/A
	- the base material of the printed circuit board withstands the test of Annex E	No open of conductor of a printed board	N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		P
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified		N/A
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction of other parts of the appliance does not rely on the correct functioning of the electronic circuit		P
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		P
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		P
	b) open circuit at the terminals of any component	Evaluated	P
	c) short circuit of capacitors, unless	Short-circuit C1, C3	P
	they comply with IEC 60384-14	X, Y capacitors	P

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Clause	Requirement - Test	Result - Remark	Verdict
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	Short-circuit D8, Q1, pin 1-2 of U1, pin 3-4 of U1	P
	This fault condition is not applied between the two circuits of an optocoupler		P
	e) failure of triacs in the diode mode		N/A
	f) failure of microprocessors and integrated circuits		N/A
	g) failure of an electronic power switching device		N/A
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		N/A
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to g) of 19.11.2		P
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		N/A
	a device that can be placed in the stand-by mode,		N/A
	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode		N/A
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, the tests being carried out after the protective electronic circuit has operated, except that		P
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		N/A
	Surge protective devices disconnected, unless	MOV1	P
	They incorporate spark gaps		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		P
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		P
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		P

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Clause	Requirement - Test	Result - Remark	Verdict
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		P
	Earthed heating elements in class I appliances disconnected	No heating elements	N/A
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		P
19.11.4.6	Appliances having a rated current not exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-11		P
	Appliances having a rated current exceeding 16 A are subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-34		N/A
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		P
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate	No programmable component	N/A
	The appliance continues to operate normally, or		N/A
	requires a manual operation to restart		N/A
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A).....:	Measured current: 10A min. Rated fuse current: 1,6A	P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9 .....:	No higher temperature	P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		P
	- basic insulation (V) .....:	1250V	P
	- supplementary insulation (V).....:	1750V	P

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Clause	Requirement - Test	Result - Remark	Verdict
	- reinforced insulation (V) .....:	3000V	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		P
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		N/A
	- do not become operational, or	No electronic switch	N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		N/A
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
19.14	Appliances operated under the conditions of clause 11, any contactor or relay contact operating under the conditions of clause 11 being short-circuited	No contact or relay.	N/A
	For a relay or contactor with more than one contact, all contacts are short-circuited at the same time		N/A
	A relay or contactor operating only to ensure the appliance is energized for normal use is not short-circuited		N/A
	If more than one relay or contactor operates in clause 11, they are short-circuited in turn		N/A
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	No mains voltage selector switch	N/A
20	STABILITY AND MECHANICAL HAZARDS		P
20.1	Appliances having adequate stability	Built-in product, shall be considered in end product again.	P

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Clause	Requirement - Test	Result - Remark	Verdict
	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	No moving part	N/A
	Protective enclosures, guards and similar parts are non-detachable, and		N/A
	have adequate mechanical strength		N/A
	Enclosures that can be opened by overriding an interlock are considered to be detachable parts		N/A
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard by unexpected closure		N/A
	Not possible to touch dangerous moving parts with the test probe described		N/A
21	MECHANICAL STRENGTH		P
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling	Built-in product, shall be considered in end product again.	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		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
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P

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Clause	Requirement - Test	Result - Remark	Verdict
	Test not applicable if the thickness of supplementary insulation is at least 1 mm and reinforced insulation at least 2 mm		P
	The insulation is tested as specified, and does withstand the electric strength test of 16.3		N/A
22	CONSTRUCTION		P
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IPX0	N/A
22.2	Stationary appliance: means to ensure all-pole disconnection from the supply being provided:		N/A
	- a supply cord fitted with a plug, or	Not stationary appliance	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	Built-in power supply	N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Pull force of 50N 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 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; 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	Not for heating liquids	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 0,1µF, the appliance being disconnected from the supply at the instant of voltage peak	0,22µF X capacitor, two 820K bleeding resistances connected in series across L and N.	P

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Clause	Requirement - Test	Result - Remark	Verdict
	Voltage not exceeding 34 V (V).....:	Max 19,6V measured	P
22.6	Electrical insulation not affected by condensing water or leaking liquid	No liquid	N/A
	Electrical insulation of Class II appliances not affected if a hose ruptures or seal leaks		N/A
	In case of doubt, test as described		N/A
22.7	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		N/A
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless	No such substances used	N/A
	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:	No thermal cut-outs	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		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
22.12	Handles, knobs etc. fixed in a reliable manner	No handles and knobs	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	No handles	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	No such hooks	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	No cord reels	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	No spacers	N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion	Solid pins for GT*93021-*** - D2	P
22.19	Driving belts not relied upon to provide the required level of insulation, unless		N/A
	constructed to prevent inappropriate replacement		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		P
	material used is non-corrosive, non-hygroscopic and non-combustible		P
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless	No such substances used	P
	impregnated		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements	No heating element	N/A
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used	No oil used	P
22.24	Bare heating elements, except in class III appliances or class III constructions that do not contain live parts, adequately supported	No heating elements	N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		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	Class II	N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation	Two Y capacitors in series	P
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water, separated from live parts by double or reinforced insulation		N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation	Built-in products, shall be considered in end product.	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

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Clause	Requirement - Test	Result - Remark	Verdict
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	No ceramic or similar material or beads	N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation	No heating conductor	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	No conductive liquids	N/A
	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
	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	No knobs, handles, levers	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	No knobs, handles, levers	N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	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	No handles	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	No such capacitor	P
	the capacitors comply with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out	No thermal cut-out	N/A
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A
	If the appliance cannot operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch for stopping the operation. The actuating member of the switch being easily visible and accessible	Not for remote operation	N/A
22.41	No components, other than lamps, containing mercury		P

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Clause	Requirement - Test	Result - Remark	Verdict
22.42	Protective impedance consisting of at least two separate components	Two Y-capacitors in series	P
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited	One Y-capacitor short-circuit: max 0,168 mA peak (GTM93021-2036-P2)	P
	Resistors checked by the test of 14.1 a) in IEC 60065		N/A
	Capacitors checked by the tests for class Y capacitors in IEC 60384-14	Approved Y capacitors	P
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances not having an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
22.46	For programmable protective electronic circuits used to ensure compliance with the standard, the software contains measures to control the fault/error conditions in table R.1	No programmable protective electronic circuits	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	Not for connecting to the water mains	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	Not for connecting to the water mains	N/A
22.49	For remote operation, the duration of operation is to be set before the appliance can be started, unless	No remote operation function	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	No remote operation function	N/A

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Clause	Requirement - Test	Result - Remark	Verdict
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	No remote operation function	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:		N/A
	- 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	No socket-outlet on the appliance	N/A
23	INTERNAL WIRING		P
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well-rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts	No moving parts	N/A
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges	No beads	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	Built-in products, shall be considered in end product.	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

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Clause	Requirement - Test	Result - Remark	Verdict
	Not more than 10% of the strands of any conductor broken, and		N/A
	not more than 30% for wiring supplying circuits that consume no more than 15W		N/A
23.4	Bare internal wiring sufficiently rigid and fixed	No bare internal wiring	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	Epoxy resin used as supplementary fixed means	N/A
	be such that it can only be removed by breaking or cutting		N/A
23.7	The colour combination green/yellow only used for earthing conductors	Class II	N/A
23.8	Aluminium wires not used for internal wiring	No aluminium wires	P
23.9	Stranded conductors not consolidated by soldering where they are subjected to contact pressure, unless	No stranded conductors	N/A
	the contact pressure is provided by spring terminals		N/A
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	COMPONENTS		P
24.1	Components comply with safety requirements in relevant IEC standards		P
	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	Transformer is tested according to annex G	P

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Clause	Requirement - Test	Result - Remark	Verdict
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P
	Components not tested and found to comply with relevant IEC standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard	No lampholder or starterholder	N/A
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309		P
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	Certified Y capacitor	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		P
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000	No switch	N/A
	If they have to be tested, they are tested according to Annex H		N/A
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	If the switch only operates a motor staring relay complying with IEC 60730-2-10 with the number of cycles of a least 10 000 as specified, the complete switching system need not be tested		N/A
24.1.4	Automatic controls complying with IEC 60730-1 with the relevant part 2. The number of cycles of operation being at least:		N/A
	- thermostats: 10 000	No automatic control	N/A
	- temperature limiters: 1 000		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- self-resetting thermal cut-outs: 300		N/A
	- voltage maintained non-self-resetting thermal cut-outs: 1 000		N/A
	- other non-self-resetting thermal cut-outs: 30		N/A
	- timers: 3 000		N/A
	- energy regulators: 10 000		N/A
	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	No appliance couplers	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	No lamp holders	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	Not for remote operation	N/A
24.1.8	The relevant standard for thermal links is IEC 60691	No thermal links	N/A
	Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19		N/A
24.1.9	Contactors and relays, other than motor starting relays, tested as part of the appliance	No contactors or relays	N/A
	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.....:		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
24.2	Appliances not fitted with:		P
	- switches or automatic controls in flexible cords	No switch	P
	- devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance	No such device	P
	- thermal cut-outs that can be reset by soldering, unless	No thermal cut-out	P
	the solder has a melding point of at least 230 °C		N/A
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and have a contact separation in all poles, providing full disconnection under overvoltage category III conditions	No switch	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	No plug and socket-outlets for extra-low voltage circuits	N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance, and used accordingly	No motor	N/A
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
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	No motor	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	No hose-sets	N/A
	They are supplied with the appliance		N/A
	Appliances intended to be permanently connected to the water mains not connected by a detachable hose-set		N/A
24.8	Motor running capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, not causing a hazard in event of a failure	No motor running capacitors	N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	One or more of the following conditions are to be met:		N/A
	- the capacitors are of class P2 according to IEC 60252-1		N/A
	- the capacitors are housed within a metallic or ceramic enclosure		N/A
	- the distance of separation of the outer surface to adjacent non-metallic parts exceeds 50 mm		N/A
	- adjacent non-metallic parts within 50 mm withstand the needle-flame test of Annex E		N/A
	- adjacent non-metallic parts within 50 mm classified as at least V-1 according to IEC 60695-11-10		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		N/A
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		N/A
	- supply cord fitted with a plug,	Built-in products, shall be considered in end product.	N/A
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or		N/A
	- pins for insertion into socket-outlets		N/A
25.2	Appliance not provided with more than one means of connection to the supply mains	Built-in products, shall be considered in end product.	N/A
	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:		N/A
	- 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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- 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:		N/A
	- type X attachment		N/A
	- type Y attachment		N/A
	- 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	Single-phase	N/A
25.6	Plugs fitted with only one flexible cord		N/A
25.7	Supply cords, other than for class III appliances, being one of the following types:		N/A
	- 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
	- 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		N/A
	• light polyvinyl chloride sheathed cord (60227 IEC 52), for appliances not exceeding 3 kg		N/A
	• ordinary polyvinyl chloride sheathed cord (60227 IEC 53), for other appliances		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	- heat resistant polyvinyl chloride sheathed. Not used for type X attachment other than specially prepared cords		N/A
	• heat-resistant light polyvinyl chloride sheathed cord (60227 IEC 56), for appliances not exceeding 3 kg		N/A
	• heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), for other appliances		N/A
	Supply cords for class III appliances adequately insulated		N/A
	Test with 500 V for 2 min for supply cords of class III appliances that contain live parts		N/A
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm²).....:		N/A
25.9	Supply cords not in contact with sharp points or edges		N/A
25.10	Supply cord of class I appliances have a green/yellow core for earthing	Class II	N/A
25.11	Conductors of supply cords not consolidated by soldering where they are subject to contact pressure, unless	Not subject to contact pressure	N/A
	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	Not for moulding	N/A
25.13	Inlet openings so constructed as to prevent damage to the supply cord	No supply cord	N/A
	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
25.14	Supply cords moved while in operation adequately protected against excessive flexing		N/A
	Flexing test, as described:		N/A
	- applied force (N).....:		N/A
	- number of flexings.....:		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	The test does not result in:		N/A
	- 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		N/A
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		N/A
	Pull and torque test of supply cord, values shown in table 12: mass (kg); pull (N); torque (not on automatic cord reel) (Nm) .....:		N/A
	Cord not damaged and max. 2 mm displacement of the cord		N/A
25.16	Cord anchorages for type X attachments constructed and located so that:		N/A
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of supply cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless		N/A
	they are separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless		N/A
	it is part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, unless		N/A

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

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Clause	Requirement - Test	Result - Remark	Verdict
	2 N test to the conductor for portable appliances; no contact with accessible metal parts		N/A
25.22	Appliance inlets:		N/A
	- live parts not accessible during insertion or removal	No appliance inlet	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:	Built-in products, shall be considered in end product.	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		P
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors	For GT*93021-*** -T2, approved screw type terminal blocks used; for GT*93021-*** -D2, solid pins used	P
	Terminals only accessible after removal of a non-detachable cover, except	Built-in products, shall be considered in end product.	N/A
	for class III appliances that do not contain live parts		N/A
	Earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
26.2	Appliances with type X attachment and appliances for the connection of cables to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless		N/A
	the connections are soldered		N/A
	Screws and nuts not used to fix any other component, except		N/A
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone, unless		N/A
	barriers provided so that neither clearances nor creepage distances between live parts and other metal parts reduced below the values for supplementary insulation if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection of cables of fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure but without damaging the conductor		N/A
	Terminals fixed so that when the clamping means is tightened or loosened:		N/A
	- 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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and,		N/A
	for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection of cables of fixed wiring suitable for connection of conductors with cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm^2).....:		N/A
	If a specially prepared cord is used, terminals need only be suitable for that cord		N/A
26.7	Terminals for type X attachment, except in class III appliances not containing live parts, accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection of fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified	For GT*93021-*** -D2	P
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless	For GT*93021-*** -T2	P
	conductors ends fitted with means suitable for screw terminals		N/A
	Pull test of 5 N to the connection		P
26.11	For type Y and Z attachment, soldered, welded, crimped or similar connections may be used	Solid pins soldered on PCB for GT*93021-*** -D2; Screw clamping for GT*93021-*** -T2	P
	For Class II appliances, the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone	Output conductors are fixed by glue in addition to the soldering	P
	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		P
27	PROVISION FOR EARTHING		P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet	Class II	N/A
	Earthing terminals and earthing contacts not connected to the neutral terminal		N/A
	Class 0, II and III appliances have no provision for earthing		P
	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		N/A
	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		N/A
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		N/A
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		N/A
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		N/A
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N/A
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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 Ω at the specified low-resistance test (Ω)....::		N/A
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		P
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses	Electrical connections screws within approved terminal block used in model GT*93021-*** - T2	P
	Screws not of soft metal liable to creep, such as zinc or aluminium	Approved terminal block with screws.	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		P
	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		N/A
	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....::		N/A
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	Approved terminal block with screws.	N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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:		N/A
	• 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		N/A
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N/A
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		N/A
	- in normal use,		N/A
	- during user maintenance,		N/A
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		N/A
	At least two screws being used for each connection providing earthing continuity, unless		N/A
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		N/A
	This requirement does not apply to screws in the earthing circuit if at least two screws are used, or		N/A
	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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		P
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies .....:	No coating	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
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) Altitude 5000m is considered.	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		N/A
	Impulse voltage test is not applicable:		N/A
	- 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		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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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		P
29.1.4	Clearances for functional insulation are the largest values determined from:		P
	- table 16 based on the rated impulse voltage .....:	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz	44,6 kHz	P
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless	1,5 mm is the largest	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		N/A
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited	The components and circuits after current fuse	P
	Lacquered conductors of windings considered to be bare conductors	Magnet wires is treated as bare conductors	P
	However, clearances at crossover points are not measured		P
	Clearance between surfaces of PTC heating elements may be reduced to 1mm	No PTC heating elements	N/A
29.1.5	Appliances having higher working voltages than rated voltage, clearances for basic insulation are the largest values determined from:		P
	- table 16 based on the rated impulse voltage .....:	245V working voltage, 1,5mm based on 2500V impulse voltage	P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz	44,6 kHz	P
	If clearances for basic insulation are selected from Table F.7a of IEC 60664-1 or Clause 4 of IEC 60664-4, the clearances of supplementary insulation are not less than those specified for basic insulation		P
	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		P
	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		N/A
	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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
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.....:	0,125mm according table 2 of IEC60664-4, not 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 .....:	Creepage distance is bigger than clearance distance	P
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 .....:	0,125mm according table 2 of IEC60664-4, not exceeding the values in table 17	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 .....:	0,25mm according table 2 of IEC60664-4, not exceeding the values in table 17	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.....:	0,125mm according table 2 of IEC60664-4, not exceeding the values in table 18	N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		P
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		P
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	- 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		P
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of clause 19 does not exceed the value specified in table 3, the test of IEC 60068-2-2 is not carried out		P
29.3.4	Thickness of accessible parts of reinforced insulation consisting of a single layer not less than specified in table 19.....:		N/A
30	RESISTANCE TO HEAT AND FIRE		P
30.1	External parts of non-metallic material,	Enclosure, epoxy resin, terminal block	P
	parts supporting live parts, and	PCB, terminal block and bobbin	P
	parts of thermoplastic material providing supplementary or reinforced insulation	Enclosure	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).....:	Enclosure and epoxy resin (see appended table)	P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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).....:	Terminal block, PCB and bobbin (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) .....:	Test temperature 105°C for enclosure and epoxy resin, 150°C for PCB, terminal block and bobbin are highest. (see appended table)	P
30.2	Parts of non-metallic material resistant to ignition and spread of fire		P
	This requirement does not apply to:		P
	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	Not for remote operation	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	Enclosure: no ignition. (see appended table)	P
	However, test not carried out if the material is classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 550 °C, or		N/A
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out need to meet the requirements in ISO 9772 for material classified HBF		N/A
30.2.2	Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and		N/A
	parts of non-metallic material within a distance of 3mm of such connections,		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	subjected to the glow-wire test of IEC 60695-2-11		N/A
	The test severity is:		N/A
	- 750 °C, for connections carrying a current exceeding 0,5 A during normal operation		N/A
	- 650 °C, for other connections		N/A
	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:		N/A
	- 750 °C, for connections carrying a current exceeding 0,5 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:		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
	Glow-wire test not applicable to conditions as specified .....:		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 .....:	connections on small components on printed circuit boards	P
30.2.3.1	Parts of non-metallic material supporting connections carrying a current exceeding 0,2 A during normal operation, and	Bobbin, terminal block	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	Bobbin, terminal block, 850 °C: no ignition. (see appended table)	P
	Glow-wire applied to an interposed shielding material, if relevant		P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least 850 °C		P
30.2.3.2	Parts of non-metallic material supporting connections, and	Bobbin, terminal block	P
	parts of non-metallic material within a distance of 3mm,	Blade holder	P
	subjected to glow-wire test of IEC 60695-2-11		P
	The test severity is:		P
	- 750 °C, for connections carrying a current exceeding 0,2 A during normal operation	Bobbin, terminal block, 850°C no ignition.	P
	- 650 °C, for other connections		N/A
	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:		N/A
	- 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:		N/A
	- 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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	The consequential needle-flame test of Annex E applied to non-metallic parts that encroach within the vertical cylinder placed above the centre of the connection zone and on top of the non-metallic parts supporting current-carrying connections, and parts of non-metallic material within a distance of 3 mm of such connections if these parts are those:		N/A
	- parts that withstood the glow-wire test of IEC 60695-2-11 of 750 °C or 650 °C as appropriate, but produce a flame that persist longer than 2 s, or		N/A
	- parts that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts, that comprised material having a glow-wire flammability index of at least 750 °C or 650 °C as appropriate, or		N/A
	- small parts for which the needle-flame test of Annex E was applied, or		N/A
	- small parts for which a material classification of V-0 or V-1 was applied		N/A
	However, the consequential needle-flame test is not carried out on non-metallic parts, including small parts, within the cylinder that are:		P
	- 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	PCB: V-0	P
	- 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		N/A
	Test not applicable to conditions as specified.....:	V-0	P
31	RESISTANCE TO RUSTING		P
	Relevant ferrous parts adequately protected against rusting	Solid pins for GT*93021-*** - D2 galvanized.	P
	Tests specified in part 2 when necessary		N/A
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		P
	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use		P
	Compliance is checked by the limits or tests specified in part 2, if relevant	Tested according EN62233, <10%	P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		N/A
	Description of routine tests to be carried out by the manufacturer		N/A
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES		N/A
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	This annex does not apply to battery chargers		N/A
3.1.9	Appliance operated under the following conditions:		N/A
	- the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	- the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	- if the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.B.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N/A
	The positive terminal indicated by symbol IEC 60417-5005 and the negative terminal by symbol IEC 60417-5006		N/A
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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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:		N/A
	- 100, if the mass of the part does not exceed 250 g (g) .....:		N/A
	- 50, if the mass of the part exceeds 250 g .....:		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords in class III appliances or class III constructions operating at safety extra-low voltage not containing live parts		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		N/A
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
	Test conditions as specified		N/A
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		N/A
	Applicable to appliances having motors that incorporate thermal motor protectors necessary for compliance with the standard		N/A
	Test conditions as specified		N/A
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		N/A
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		N/A
7	Severities		N/A
	The duration of application of the test flame is 30 s ± 1 s		N/A
9	Test procedure		N/A
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		N/A
9.2	The first paragraph does not apply		N/A
	If possible, the flame is applied at least 10 mm from a corner		N/A
9.3	The test is carried out on one specimen		N/A
	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		N/A
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		N/A
F	ANNEX F (NORMATIVE) CAPACITORS		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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:		N/A
1.5	Terms and definitions		N/A
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		N/A
	Items a) and b) are applicable		N/A
3.4	Approval testing		N/A
3.4.3.2	Table 3 is applicable as described		N/A
4.1	Visual examination and check of dimensions		N/A
	This subclause is applicable		N/A
4.2	Electrical tests		N/A
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		N/A
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		N/A
	This subclause is applicable		N/A
4.14	Endurance		N/A
	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		N/A
	This subclause is applicable		N/A
4.18	Active flammability test		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	This subclause is applicable		N/A
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		P
	The following modifications to this standard are applicable for safety isolating transformers:		P
7	Marking and instructions		N/A
7.1	Transformers for specific use marked with:		N/A
	-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		N/A
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		P
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		P
29	Clearances, creepage distances and solid insulation		P
29.1, 29.2, 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		P
	For insulated winding wires complying with subclause 19.12.3 of IEC 61558-1 there are no requirements for clearances or creepage distances		P
	For windings providing reinforced insulation, the distance specified in item 2c of table 13 of IEC 61558-1 is not assessed		P
	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		P
H	ANNEX H (NORMATIVE) SWITCHES		N/A
	Switches comply with the following clauses of IEC 61058-1, as modified below:		N/A
	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		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	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		N/A
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		N/A
15.1	Not applicable		N/A
15.2	Not applicable		N/A
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		N/A
	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		N/A
	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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		N/A
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		N/A
8	Protection against access to live parts		N/A
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		N/A
11.3	The temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	The temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N/A
16	Leakage current and electric strength		N/A
16.3	Insulation between live parts of the motor and its other metal parts is not subjected to the test		N/A
19	Abnormal operation		N/A
19.1	The tests of 19.7 to 19.9 are not carried out		N/A
19.I.101	Appliance operated at rated voltage with each of the following fault conditions:		N/A
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		N/A
22.I.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	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		N/A
	When production samples are used, three samples of the printed circuit board are tested		N/A
5.7.1	Cold		N/A
	The test is carried out at -25 °C		N/A
5.7.3	Rapid change of temperature		N/A
	Severity 1 is specified		N/A
5.9	Additional tests		N/A
	This subclause is not applicable		N/A
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		P
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		P
	Information for the determination of clearances and creepage distances		P
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		P

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		P
	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		P
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		P
	- 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		P
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		N/A
	- 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		N/A
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		N/A
7	Test apparatus		N/A
7.3	Test solutions		N/A
	Test solution A is used		N/A
10	Determination of proof tracking index (PTI)		N/A
10.1	Procedure		N/A
	The proof voltage is 100V, 175V, 400V or 600V ...:		N/A
	The test is carried out on five specimens		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N/A
10.2	Report		N/A
	The report states if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		P
	Description of tests for determination of resistance to heat and fire		P
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		P
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WDaE		P
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150V, 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		P
5.7	The ambient temperature for the tests of clauses 11 and 13 is 40 +3/0 °C	50°C according declaration of client	P
7.1	The appliance marked with the letters WdaE		P
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		P
	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		P
11.8	The values of Table 3 are reduced by 15 K	Reduced by 25K	P
13.2	The leakage current for class I appliances not exceeding 0,5 mA	Class II	N/A
15.3	The value of t is 37 °C	50°C according declaration of client	P
16.2	The leakage current for class I appliances not exceeding 0,5 mA (mA):	Class II	N/A
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		P

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Clause	Requirement - Test	Result - Remark	Verdict
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		N/A
	Description of tests for appliances incorporating electronic circuits		N/A
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		N/A
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 validated in accordance with the requirements of this annex		N/A
R.1	Programmable electronic circuits using software		N/A
	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		N/A
	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2 use measures to control and avoid software-related faults/errors in safety-related data and safety-related segments of the software		N/A
R.2.1.1	Programmable electronic circuits requiring software incorporating measures to control the fault/error conditions specified in table R.2 have one of the following structures:		N/A
	- 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:		N/A
	- 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		N/A
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

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Clause	Requirement - Test	Result - Remark	Verdict
R.2.2.2	Programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.2 and that use dual channel structures with comparison, have additional fault/error detection means for any fault/errors not detected by the comparison		N/A
R.2.2.3	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, means are provided for the recognition and control of errors in transmissions to external safety-related data paths		N/A
R.2.2.4	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, the programmable electronic circuits incorporate measures to address the fault/errors in safety-related segments and data indicated in table R.1 and R.2 as appropriate		N/A
R.2.2.5	For programmable electronic circuits with functions requiring software incorporating measures to control the fault/error conditions specified in table R.1 or R.2, detection of a fault/error occur before compliance with clause 19 is impaired		N/A
R.2.2.6	The software is referenced to relevant parts of the operating sequence and the associated hardware functions		N/A
R.2.2.7	Labels used for memory locations are unique		N/A
R.2.2.8	The software is protected from user alteration of safety-related segments and data		N/A
R.2.2.9	Software and safety-related hardware under its control is initialized and terminates before compliance with clause 19 is impaired		N/A
R.3	Measures to avoid errors		N/A
R.3.1	General		N/A
	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		N/A
	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

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Clause	Requirement - Test	Result - Remark	Verdict
R.3.2	Specification		N/A
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		N/A
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		N/A
R.3.2.3.1	Based on the architecture design, software is suitably refined into modules		N/A
	Software module design and coding is implemented in a way that is traceable to the software architecture and requirements		N/A
R.3.2.3.2	Software code is structured		N/A
R.3.2.3.3	Coded software is validated against the module specification by static analysis		N/A
	The module specification is validated against the architecture specification by static analysis		N/A
R.3.3.3	Software validation		N/A
	The software is validated with reference to the requirements of the software safety requirements specification		N/A
	Compliance is checked by simulation of:		N/A
	- input signals present during normal operation		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	- anticipated occurrences		N/A
	- undesired conditions requiring system action		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

ANNEX 1: COMMON MODIFICATIONS FOR EN60335-1: 2012 (group differences for CENELEC)			
6	Classification		P
6.1	Delete “class 0” and “class 0I”.		P
7	Marking and instructions		P
7.1	Add: The marking of rated voltage or rated voltage range, for appliances intended to be connected to the supply mains, shall cover: - 230 V for single-phase appliances; - 400 V for multi-phase appliances.	230V included	P
7.10	Add : Devices used to start/stop operational functions of the appliance, if any, shall be distinguished from other manual devices.	No start/stop operational device	N/A
	An indication that the device has been operated shall be given by:		N/A
	-A tactile feedback or		N/A
	-An audible and visual feedback		N/A
	A selector switch with an off-position clearly identifiable is allowed.	No selector switch with off position	N/A
	An ON/OFF switch, if any, is considered a suitable device to stop operational functions.	No ON/OFF switch	N/A
	A plug is not considered a suitable device to stop operational functions, as it can be difficult to be reached by vulnerable persons.	No plug	N/A
7.12	Replace the 3rd, 4th and 5th paragraph by the following		P
	- 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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
7.12.Z1	Add the following new subclause before 7.12.1		P
	The specific instructions related to the safe operation of this appliance shall be collated together in the front section of the user instructions.		P
	The height of the characters, measured on the capital letters, shall be at least 3 mm.		P
	These instructions shall also be available in an alternative format, e.g. on a website		P
7.14	Add: NOTE Z1 For the evaluation of legibility and clarity of safety warnings guidance can be found in IEC 62079.		P
8	Protection against access to live parts		P
8.1.1	Replace the 3rd paragraph by the following: Use of test probe B of and probe 18 of EN 61032, with a force not exceeding 1 N: no contact with live parts		P
11	Heating		P
11.8	Delete the second sentence of the first paragraph: However, if the temperature rise of the motor winding exceeds the value specified in table 3 or if there is doubt with regard to the temperature classification of the insulation of the motor, the tests of annex C are carried out.	No motor	N/A
	Replace in Table 3 the row “External enclosure of motor-operated appliances, except handles held in normal use”		P
15	Moisture resistance		P
15.1.2	Add the following after the second paragraph:		N/A
	Appliances with an automatic cord reel are tested with the cord in the most unfavourable position in such a way that the reeling of the wet cord may affect electrical insulation during operation. The cord shall not be dried before reeling.	No automatic cord reel	N/A
20	Stability and mechanical hazards		P
20.2	Replace NOTE 1 by the following requirement: For appliances having dangerous movable parts, due to their main function, e.g. the needle of a sewing machine, tools of kitchen machines or the blade of an electrical knife, full protection is not possible for performing their intended use.	No moving part	N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
22	Construction		P
	Added: Hazard includes ingestion or a choking hazard for vulnerable people.	No handles and knobs	N/A
24	Components		P
24.1	Components shall comply with the safety requirements specified in the relevant standards as far as they reasonably apply.		P
	List of components ..... :	(see appended table)	P
	Clause 29 of this standard apply between live parts of components and accessible parts of the appliance, unless otherwise specified		P
	Clause 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		P
	Components that have not been previously tested or do not comply with the standard for the relevant component are tested according to the requirement of 30.2.		P
	Components that have been previously tested and shown to comply with the resistance to fire requirements in the standard for the relevant component need not be retested provided that:	PCB	P
	– the severity specified in the component standard is not less than the severity specified in 30.2 of this standard,		P
	and –unless the preselection alternative is used, the test report for the component states whether it complied with the standard for the relevant component with or without flame. Flames existing for a cumulative time not exceeding 2 s during the test are ignored.		P
	If the above two conditions are not satisfied, the component is tested as part of the appliance.		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	Transformer is tested according to annex G	P
	For components mentioned in 24.1.1 to 24.1.9 no additional tests specified in the relevant component standard are necessary other than those specified in 24.1.1 to 24.1.9		P

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Clause	Requirement - Test	Result - Remark	Verdict
	Components not tested and found to comply with relevant standard and components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders that have not being tested and found to comply with the relevant standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant standard.	No lampholder or starterholder	N/A
	No additional tests specified for nationally standardized plugs such as those detailed in IEC/TR 60083 or connectors complying with the standard sheets of IEC 60320-1 and IEC 60309.		P
	Plugs and socket-outlets and other connecting devices of interconnection cords shall not be 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, if direct supply to these parts from the supply mains could give rise to a hazard.		P
24.1.3	Add NOTE Z1 For this test a thermostat or timer that is operating the relay or contactor is considered to be a switch.		N/A
24.1.7	Replaced by: 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.	Not for remote operation	N/A
	Compliance with Clause 8 of this standard shall not be 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.	No motor running capacitors	N/A
25	Supply connection and external flexible cords		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
25.6	Add: Supply cords of single-phase portable appliance shaving a rated current not exceeding 16 A shall be fitted with a plug complying with the following standard sheets of IEC/TR 60083.	Built-in	N/A
	–for class I appliances standard sheet C2b, C3b or C4;		N/A
	–for class II appliances standard sheet C5 or C6.		N/A
25.7	Add the following text after the last dash and before the paragraph regarding “Supply cords for class III appliances”:		N/A
	Halogen-free thermoplastic compound sheathed.		N/A
	• halogen-free thermoplastic compound sheathed cords (code designation H03Z1Z1H2-F, H03Z1Z1-F), for appliances having a mass not exceeding 3 kg;		N/A
	• halogen-free thermoplastic compound sheathed cords (code designation H05Z1Z1H2-F or H05Z1Z1-F), for other appliances;		N/A
	Cross-linked halogen-free compound sheathed.		N/A
	• cross-linked halogen-free compound sheathed cords (code designation H07ZZ-F)		N/A
26	Terminals for external conductors		N/A
26.11	Add: 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	Clearances, creepage distances and solid insulation		P
29.3.Z1	Appliance shall be constructed so that if there is a possibility of damaging the insulation during installation, the insulation shall withstand the scratch and penetration test of 21.2.	No installation required	N/A
32	Radiation, toxicity and similar hazards		P
	Add: Compliance regarding electromagnetic fields is checked according to EN 50366 or EN 62233.		P
I	Annex I (normative) Motors having basic insulation that is inadequate for the rated voltage of the appliance		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict
19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the following fault conditions		N/A
	When any of the fault conditions are simulated, the duration of the test is as specified in 19.7.		N/A
ZA	Annex ZA (normative) Special national conditions		P
19.5	Norway: The test is also applicable to appliances intended to be permanently connected to fixed wiring.	Class II	N/A
22.2	Norway: The second paragraph of this subclause that deals with single-phase, permanently connected class I appliances having heating elements, is not applicable due to the supply system.	Class II	N/A
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
25.8	Ireland and United Kingdom: In the table, replace the line for 10 A and 16 A by: > 10 and ⩽13 1,25 > 13 and ⩽16 1,5	No supply cord provided	N/A
ZB	Annex ZB (informative) A-deviations		P
25.6	Ireland (Statutory Instrument No. 525 of 1997) 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(Statutory Instrument 1994 No 1768) 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.	No plug provided	N/A
ZC	Annex ZC (normative) Normative references to international publications with their corresponding European publications		P
	This Standard incorporates provisions from the publications listed		P
ZD	ANNEX ZD (INFORMATIVE) IEC and CENELEC CODE DESIGNATIONS FOR FLEXIBLE CORDS		N/A

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Clause	Requirement - Test	Result - Remark	Verdict
	A list of code designations for different types of flexible cords		N/A
ZE	ANNEX ZE (INFORMATIVE) SPECIFIC ADDITIOINAL REQUIREMENTS FOR APPLIANCES AND MACHINES INTENDED FOR COMMERCIAL USE		N/A
	Modifications to this standard are applicable for appliances and machines intended for commercial use.		N/A
ZF	ANNEX ZF (INFORMATIVE) CRITERIA APPLIED FOR THE ALLOCATION OF PRODUCTS COVERED BY STANDARDS IN THE EN 60335 SERIES UNDER LVD OR MD		N/A
	Table ZF1 listed the standards under CENELEC/TC 61 with their allocation under LVD or MD		N/A
ZG	Annex ZG (normative) UV appliances		N/A
	Modifications to this standard apply to appliances having UV emitters		N/A
ZZ	ANNEX ZZ (INFORMATIVE) COVERAGE OF ESSENTIAL REQUIREMENTS OF EC DIRECTIVES		N/A
	The standard covers all relevant essential requirements as given in the EC Directives 2006/95/EC and 2006/42/EC.		N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

TABLE R.1 – GENERAL FAULT/ERROR CONDITIONS						
Component [1]	Fault/error	Acceptable measures [2] [3]	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						N/A
1.3 Programme counter	Stuck at	Functional test, or Periodic self-test, or Independent time-slot monitoring, or Logical monitoring of the programme sequence	H.2.16.5 H.2.16.6 H.2.18.10.4 H.2.18.10.2			N/A
2 Interrupt handling and execution	No interrupt or too frequent interrupt	Functional test, or time-slot monitoring	H.2.16.5 H.2.18.10.4			N/A
3 Clock	Wrong frequency (for quartz synchronized clock: harmonics/ sub-harmonics only)	Frequency monitoring, or time slot monitoring	H.2.18.10.1 H.2.18.10.4			N/A

IEC 60335-1			
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 DC fault	Word protection with single bit redundancy Comparison of redundant CPUs by either: - reciprocal comparison - independent hardware comparator	H.2.19.8.2 H.2.18.15 H.2.18.3			N/A
5.1 VOID						N/A
5.2 Addressing	Wrong address	Word protection with single bit redundancy including the address	H.2.19.8.2			N/A
6 External communication	Hamming distance 3	Word protection with multi-bit redundancy, or CRC – single work, or Transfer redundancy, or Protocol test	H.2.19.8.1 H.2.19.4.1 H.2.18.2.2 H.2.18.14			N/A
6.1 VOID						N/A
6.2 VOID						N/A

IEC 60335-1						
Clause	Requirement - Test		Result - Remark			Verdict
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			N/A
	Wrong sequence	Logical monitoring, or time-slot monitoring, or Scheduled transmission (same options as for wrong point in time)	H.2.18.3 H.2.18.10.2 H.2.18.10.4 H.2.18.18			
7 Input/output periphery	Fault conditions specified in 19.11.2	Plausibility check Comparison of redundant communication channels by either: - reciprocal comparison - independent hardware comparator	H.2.18.13 H.2.18.15 H.2.18.3			N/A
7.1 VOID						N/A
7.2 Analog I/O 7.2.1 A/D and D/A-converter	Fault conditions specified in 19.11.2	Plausibility check	H.2.18.13			N/A
7.2.2 Analog multiplexer	Wrong addressing	Plausibility check	H.2.18.13			N/A
8 VOID						N/A

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

9 Custom chips [4] 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.

[1] For fault/error assessment, some components are divided into their sub-functions.

[2] For each sub-function in the table, the Table R.2 measure will cover the software fault/error.

[3] Where more than one measure is given for a sub-function, these are alternatives.

[4] To be divided as necessary by the manufacturer into sub-functions.

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Clause	Requirement - Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				N/A
Input deviation of/at:	P rated (W)	P measured (W)	dP (W, %)	Required dP (W, %)	Remark
Supplementary information:					

10.2	TABLE: Current deviation				P
Current deviation of/at:	I rated (A)	I measured (A)	dI (A, %)	Required dI (A, %)	Remark
GTM93021-1507-2.0-P2	0,6	0,432 / 0,207	-28,0 / -65,5	+20	P
GTM93021-2009-P2	0,6	0,395 / 0,191	-34,2 / -68,2	+20	P
GTM93021-2024-P2	0,6	0,407 / 0,201	-32,2 / -66,5	+20	P
GTM93021-2036-P2	0,6	0,403 / 0,193	-32,8 / -67,8	+20	P
Supplementary information: Figures shown above are corresponding to rated supply voltage of 100 Va.c and 240 Va.c respectively.					

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Clause	Requirement - Test	Result - Remark	Verdict

11.8	**TABLE: Heating test, thermocouple measurements**		P
	Test voltage (V) .....:	106 / 254,4V	—
	Ambient (°C) .....:	50	—

Thermocouple locations	Max. temperature rise measured, dT (K)	Max.temperature rise limit, dT (K)
For GTM93021-1507-2.0-P2		
External enclosure	35 / 35	50
Inside enclosure	40 / 39	For ball pressure
Table support	31 / 31	40
Input cord	25 / 24	30 (T80)
Output cord	42 / 42	55 (T105)
Winding	52 / 52	60
Core	50 / 51	For ball pressure
X capacitor CX1	40 / 35	50 (T100)
Y capacitor CY1	47 / 47	75 (T125)
Y capacitor CY2	42 / 40	75 (T125)
Optocoupler U1	46 / 45	50 (T100)
Varistor MOV1	32 / 25	35 (T85)
PCB	54 / 54	80 (T130)
Terminal block (For GTM93021-1507-2.0-T2 only)	34 / 34	50 (T100)
Supplementary information: The ambient temperature is 50°C and all corresponding limits are reduced respectively.		

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Clause	Requirement - Test	Result - Remark	Verdict

11.8	**TABLE: Heating test, thermocouple measurements (continued)**		P
	Test voltage (V) .....:	106 / 254,4V	—
	Ambient (°C) .....:	50	—

Thermocouple locations	Max. temperature rise measured, dT (K)	Max.temperature rise limit, dT (K)
For GTM93021-2009-P2		
External enclosure	28 / 25	50
Inside enclosure	30 / 26	For ball pressure
Table support	16 / 12	40
Input cord	14 / 17	30 (T80)
Output cord	26 / 26	55 (T105)
Winding	56 / 57	60
Core	52 / 52	For ball pressure
X capacitor CX1	38 / 26	50 (T100)
Y capacitor CY1	35 / 36	75 (T125)
Y capacitor CY2	30 / 29	75 (T125)
Optocoupler U1	46 / 44	50 (T100)
Varistor MOV1	32 / 24	35 (T85)
PCB	55 / 53	80 (T130)
Terminal block (For GTM93021-2009-T2 only)	18 / 17	50 (T100)
Supplementary information: The ambient temperature is 50°C and all corresponding limits are reduced respectively.		

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

11.8	TABLE: Heating test, thermocouple measurements (continued)		P
	Test voltage (V) .....:	106 / 254,4V	—
	Ambient (°C) .....:	50	—

Thermocouple locations	Max. temperature rise measured, dT (K)	Max.temperature rise limit, dT (K)
For GTM93021-2024-P2		
External enclosure	22 / 23	50
Inside enclosure	25 / 26	For ball pressure
Table support	15 / 13	40
Input cord	19 / 15	30 (T80)
Output cord	18 / 22	55 (T105)
Winding	53 / 55	60
Core	48 / 50	For ball pressure
X capacitor CX1	39 / 30	50 (T100)
Y capacitor CY1	35 / 47	75 (T125)
Y capacitor CY2	30 / 36	75 (T125)
Optocoupler U1	43 / 46	50 (T100)
Varistor MOV1	32 / 25	35 (T85)
PCB	47 / 58	80 (T130)
Terminal block (For GTM93021-2024-T2 only)	10 / 10	50 (T100)
Supplementary information: The ambient temperature is 50°C and all corresponding limits are reduced respectively.		

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

11.8	TABLE: Heating test, thermocouple measurements (continued)		P
	Test voltage (V) .....:	106 / 254,4V	—
	Ambient (°C) .....:	50	—

Thermocouple locations	Max. temperature rise measured, dT (K)	Max.temperature rise limit, dT (K)
For GTM93021-2036-P2		
External enclosure	23 / 23	50
Inside enclosure	26 / 25	For ball pressure
Table support	12 / 12	40
Input cord	19 / 16	30 (T80)
Output cord	21 / 23	55 (T105)
Winding	55 / 55	60
Core	51 / 51	For ball pressure
X capacitor CX1	42 / 30	50 (T100)
Y capacitor CY1	40 / 47	75 (T125)
Y capacitor CY2	36 / 43	75 (T125)
Optocoupler U1	46 / 46	50 (T100)
Varistor MOV1	32 / 25	35 (T85)
PCB	51 / 58	80 (T130)
Terminal block (For GTM93021-2036-T2 only)	8 / 8	50 (T100)
Supplementary information: The ambient temperature is 50°C and all corresponding limits are reduced respectively.		

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Clause	Requirement - Test	Result - Remark	Verdict

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

13.2	TABLE: Leakage current		P
	Heating appliances: 1.15 x rated input (W) .....:	N/A	—
	Motor-operated and combined appliances: 1.06 x rated voltage (V) .....:	254,4V 60Hz	—
Leakage current between		I (mA)	Max. allowed I (mA)
Live parts and accessible parts		Max 0,006 mA peak	0,35 mA peak
Supplementary information: Protective impedance and radio interference filters are disconnected before carrying out the tests.			

13.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Live parts and live parts to the mid point of two Y capacitor		1000	No
Basic insulation and accessible metal parts (or metal foil)		1750	No
Live parts and output circuit and enclosure		3000	No
Supplementary information:			

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:						

IEC 60335-1			
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) .....:	N/A	—

Leakage current between	I (mA)	Max. allowed I (mA)
Live parts and accessible parts	Max 0,008	0,25
Supplementary information: Protective impedance and radio interference filters are disconnected before carrying out the tests.		

16.3	**TABLE: Electric strength**		P

Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
Live parts and live parts to the mid point of two Y capacitor	1250	No
Basic insulation and accessible metal parts (or metal foil)	1750	No
Live parts and output circuit and enclosure	3000	No
Supplementary information:		

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Clause	Requirement - Test	Result - Remark	Verdict

17	TABLE: Overload protection, thermocouple measurements		P
Temperature rise of part/at:		dT (K)	Max. dT (K)
GTM93021-1507-2.0-P2			
Output cord		48 max	70
Winding		69 max	175
GTM93021-2009-P2			
Output cord		27 max	70
Winding		54 max	175
GTM93021-2024-P2			
Output cord		24 max	70
Winding		55 max	175
GTM93021-2036-P2			
Output cord		25 max	70
Winding		56 max	175
Supplementary information: The ambient temperature is 50°C and all corresponding limits are reduced respectively.			

17	TABLE: Overload protection, resistance method					N/A
	Test voltage (V) .....:					—
	Ambient, t1 (°C) .....:					—
	Ambient, t2 (°C) .....:					—
Temperature of winding		R1 (Ω)	R2 (Ω)	dT (K)	T (°C)	Max. T (°C)
Supplementary information:						

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Clause	Requirement - Test	Result - Remark	Verdict

19	Abnormal operation conditions		P
Operational characteristics	YES/NO	Operational conditions	
Are there electronic circuits to control the appliance operation?	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	N.A	N.A	N.A	N.A	N.A	N.A	N.A
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	Full load	Fuse or electronic circuit protection	U1 and other components	Pass	N.A	YES	Pass
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:							

19.7	TABLE: Abnormal operation, locked rotor/moving parts					N/A
	Test voltage (V) .....:					—
	Ambient, t1 (°C) .....:					—
	Ambient, t2 (°C) .....:					—
Temperature of winding	R1 (Ω)	R2 (Ω)	dT (K)	T (°C)	Max. T (°C)	

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Clause	Requirement - Test	Result - Remark	Verdict

Supplementary information:					

19.9	TABLE: Abnormal operation, running overload				N/A
	Test voltage (V) .....:				—
	Ambient, t1 (°C) .....:				—
	Ambient, t2 (°C) .....:				—
Temperature of winding	R1 (Ω)	R2 (Ω)	dT (K)	T (°C)	Max. T (°C)
Supplementary information:					

19.13	TABLE: Abnormal operation, temperature rises	P
Thermocouple locations	Max. temperature rise measured, dT (K)	Max.temperature rise limit, dT (K)
N/A	N/A	N/A
Supplementary information: Unit was protected, no higher temperature.		

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Clause	Requirement - Test	Result - Remark	Verdict

24.1	TABLE: Components information				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1])
Enclosure	SABIC INNOVATIVE PLASTICS B V	SE1X (UL E45329)	PPE+PS, V-1, 105°C, min thickness: 2,0mm	IEC 60335-1	Tested with appliance
Alt. use	SABIC INNOVATIVE PLASTICS B V	C2950 (UL E45329)	PC/ABS, V-0, 75°C, min thickness: 2,0mm	IEC 60335-1	Tested with appliance
Alt. use	SABIC INNOVATIVE PLASTICS B V	CX7211, EXCY0098 (UL E45329)	PC/ABS, V-0, 5VB, 90°C, min thickness: 2,0mm	IEC 60335-1	Tested with appliance
Alt. use	TEIJIN CHEMICALS LTD	LN-1250P, LN-1250G (UL E50075)	PC, V-0, 115°C, min thickness: 2,0mm	IEC 60335-1	Tested with appliance
Alt. use	CHI MEI CORPORATION	PA-765A (UL E56070)	ABS, V-1, 80°C, min thickness: 2,0mm	IEC 60335-1	Tested with appliance
Alt. use	CHI MEI CORPORATION	PC-540 (UL E56070)	ABS, V-1, 80°C, min thickness: 2,0mm	IEC 60335-1	Tested with appliance
Input cord (for GT*93021-***-P2)	DONGGUAN YUE YANG WIRE & CABLE CO LTD	1007 / 1015 / 1185	Min. 18AWG, min. 300V, min. 80°C (UL E230810)	IEC 60335-1	Tested with appliance
Alt. use	YONG HAO ELECTRICAL INDUSTRY CO LTD	1007 / 1015 / 1185	Min. 18AWG, min. 300V, min. 80°C (UL E240426)	IEC 60335-1	Tested with appliance
Alt. use	HIP TAI ELECTRIC WIRE CO	1007 / 1015 / 1185	Min. 18AWG, min. 300V, min. 80°C (UL E225804)	IEC 60335-1	Tested with appliance
Alt. use	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIES CO LTD	1007 / 1015 / 1185	Min. 18AWG, min. 300V, min. 80°C (UL E237831)	IEC 60335-1	Tested with appliance
Alt. use	SHENG YU ENTERPRISE CO LTD	1007 / 1015	Min. 18AWG, min. 300V, min. 80°C (UL E219726)	IEC 60335-1	Tested with appliance

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Clause	Requirement - Test	Result - Remark	Verdict

Alt. use	SUZHOU HONGMENG ELECTRONIC CO LTD	1007 / 1015 / 1185	Min. 18AWG, min. 300V, min. 80°C (UL E315421)	IEC 60335-1	Tested with appliance
Alt. use	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	1007 / 1015 / 1185	Min. 18AWG, min. 300V, min. 80°C (UL E333601)	IEC 60335-1	Tested with appliance
Alt. use	SUZHOU YEMAO ELECTRONIC CO LTD	1007 / 1015 / 1185	Min. 18AWG, min. 300V, min. 80°C (UL E353532)	IEC 60335-1	Tested with appliance
[2)] Output cord (for GT*93021-***-P2)	DONGGUAN YUE YANG WIRE & CABLE CO LTD	1015	Min. 24AWG, min. 600V, min. 105°C (UL E230810)	IEC 60335-1	Tested with appliance
Alt. use	YONG HAO ELECTRICAL INDUSTRY CO LTD	1015	Min. 24AWG, min. 600V, min. 105°C (UL E240426)	IEC 60335-1	Tested with appliance
Alt. use	HIP TAI ELECTRIC WIRE CO	1015	Min. 24AWG, min. 600V, min. 105°C (UL E225804)	IEC 60335-1	Tested with appliance
Alt. use	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIES CO LTD	1015, 1569	Min. 24AWG, min. 300V, min. 105°C (UL E237831)	IEC 60335-1	Tested with appliance
Alt. use	SHENG YU ENTERPRISE CO LTD	1015	Min. 24AWG, min. 600V, min. 105°C (UL E219726)	IEC 60335-1	Tested with appliance
Alt. use	SUZHOU HONGMENG ELECTRONIC CO LTD	1015	Min. 24AWG, min. 600V, min. 105°C (UL E315421)	IEC 60335-1	Tested with appliance
Alt. use	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	1015, 1569	Min. 24AWG, min. 300V, min. 105°C (UL E333601)	IEC 60335-1	Tested with appliance
Alt. use	SUZHOU YEMAO ELECTRONIC CO LTD	1015	Min. 24AWG, min. 600V, min. 105°C (UL E353532)	IEC 60335-1	Tested with appliance

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Clause	Requirement - Test	Result - Remark	Verdict

Alt. use	YONG HAO ELECTRICAL INDUSTRY CO LTD	SPT-1 / SPT-2	Min. 24AWG, min. 300V, min. 105°C (UL E310072)	IEC 60335-1	Tested with appliance
Alt. use	JHI WEI ELECTRIC WIRE & CABLE CO LTD	SPT-1 / SPT-2	Min. 24AWG, min. 300V, min. 105°C (UL E157718)	IEC 60335-1	Tested with appliance
Alt. use	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	SPT-1 / SPT-2	Min. 24AWG, min. 300V, min. 105°C (UL E333536)	IEC 60335-1	Tested with appliance
Alt. use	SUZHOU DIOUDE ELECTRONICS CO LTD	SPT-1 / SPT-2	Min. 24AWG, min. 300V, min. 105°C (UL E336192)	IEC 60335-1	Tested with appliance
PCB	TECHNI TECHNOLOGY LTD	T2A / T2B / T4 (UL E154355)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance
Alt. use	DONGGUAN HE TONG ELECTRONICS CO LTD	CEM1 / 2V0 (UL E243157)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance
Alt. use	CHEERFUL ELECTRONIC (HK) LTD	02 / 03 / 03A (UL E199724)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance
Alt. use	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2 (UL E251754)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance
Alt. use	SUZHOU CITY YILIHUA ELECTRONICS CO LTD	YLH-1 / YLH-2 (UL E251781)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance
Alt. use	SHANGHAI AREX PRECISION ELECTRONIC CO LTD	02V0 / 04V0 (UL E186016)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance
Alt. use	BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A (UL E177671)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance

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Alt. use	SHENZHEN TONGCHUANGXIN ELECTRONICS CO LTD	TCX (UL E250336)	V-0, 130°C, min thickness: 1,6mm	IEC 60335-1	Tested with appliance
Epoxy resin	SUZHOU POCHELY ELECTRONIC MATERIAL CO LTD	HB-5225A/B (UL E304947)	V-0	IEC 60335-1	Tested with appliance
Terminal block (only for GT*93021-***-T2 construction)	Dinkle Enterprise Co. Ltd.	EK381A-02P	250VAC, 12A, 105°C, 2 poles.	EN 60998-1 EN60998-2-1	VDE/ 40014444
Alt. use	Cixi Kaifeng Electronic Co., Ltd.	KF10H	400VAC, 41A, 100°C, 2 poles.	EN 60998-1 EN60998-2-1	VDE/ 40025775
Current fuse (F1)	Conquer Electronics Co., Ltd.	MST series	T1,6AL250VAC	IEC 60127-1 IEC 60127-3	VDE/ 40017118
Alt. use	Ever Island Electric Co., Ltd. And Walter Electric	2010	T1,6AL250VAC	IEC 60127-1 IEC 60127-3	VDE/ 40018781
Alt. use	Bel Fuse Ltd.	RST-Serie(s)	T1,6AL250VAC	IEC 60127-1 IEC 60127-3	VDE/ 40011144
Alt. use	Cooper Bussmann LLC	SS-5	T1,6AL250VAC	IEC 60127-1 IEC 60127-3	VDE/ 40015513
Alt. use	Walter Electronic Co. Ltd.	ICP-Series	T1,6AL250VAC	IEC 60127-1 IEC 60127-3	VDE/ 40012824
Alt. use	Das & Sons International Ltd.	385 T Serie(s)	T1,6AL250VAC	IEC 60127-1 IEC 60127-3	VDE/ 40008524
Alt. use	Shenzhen Lanson Electronics	SMT T1,6A250V	T1,6AL250VAC	IEC 60127-1 IEC 60127-3	VDE/ 40012592
X capacitor (CX1, optional)	Cheng Tung Industrial Co., Ltd.	CTX	X2, AC310V, Max 0,22µF, 40/110/21/C	IEC/EN 60384-14	Semko ENEC SE/12010-1 VDE/ 40022642 UL CB / US-17992-UL
Alt. use	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	X2, AC275V, Max 0,22µF, 40/100/21/C	IEC/EN 60384-14	VDE/ 40015608

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Alt. use	Tenta Electric Industrial Co. Ltd.	MEX	X2, AC275V, Max 0,22µF, 40/100/21/C	IEC/EN 60384-14	VDE/ 119119
Alt. use	Okaya Electric Industries Co. LTD	RE-Series	X2, AC275V, Max 0,22µF, 55/100/56/C	IEC/EN 60384-14	VDE/ 40028657
Alt. use	VISHAY Capacitors Belgium NV	F 1772-xxx-2xxx(R)	X2, AC310V, Max 0,22µF, 40/100/56/C	IEC/EN 60384-14	VDE/ 40005079
Alt. use	Dain Electronics Co., Ltd.	MEX, MPX, NPX	X2, AC275V, Max 0,22µF, 40/100/21/C	IEC/EN 60384-14	VDE/ 40018798
Alt. use	Sinhua Electronics (Huzhou) Co., Ltd	MPX	X2, AC300V, Max 0,22µF, 40/100/21/C	IEC/EN 60384-14	VDE/ 40014686
Alt. use	Shunde Da Hua Electric Co., Ltd.	HD-MKP-series	X2, AC275V, Max 0,22µF, 40/105/21/C	IEC/EN 60384-14	VDE/ 40001126
Alt. use	Foshan Shunde Chuang Ge Electronic Industrial Co., Ltd.	MKP-X2	X2, AC275V, Max 0,22µF, 40/105/21/C	IEC/EN 60384-14	VDE/ 40008922
Alt. use	Hongzhi Enterprises Ltd.	MPX	X2, AC275V, Max 0,22µF, 40/100/56/C	IEC/EN 60384-14	VDE/ 40023936
Alt. use	Jiangsu Xinghua Huayu Electronics Co., Ltd.	MPX - Series	X2, AC275V, Max 0,22µF, 40/100/21/C	IEC/EN 60384-14	VDE/ 40022417
Alt. use	Winday Electronic Industrial Co., Ltd.	MPX series	X2, AC275V, Max 0,22µF, 40/100/21/C	IEC/EN 60384-14	VDE/ 40018071
Alt. use	Welson Industrial Co., Ltd.	WD	X2, AC250V, Max 0,22µF, 25/125/21/B	IEC/EN 60384-14	VDE/ 115455
Y capacitor (CY1, CY2, optional)	TDK-EPC Corporation, Capacitors Group Circuit Devices Business Group	CD	Y1, 250V, max 2200pF, 25/125/56/B	IEC/EN 60384-14	VDE/ 138526
Alt. use	Success Electronics Co., Ltd.	SE, SB	Y1, 250V, max 2200pF, 30/125/56/C	IEC/EN 60384-14	VDE/ 40008996

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Alt. use	Murata Mfg. Co., Ltd.	KX	Y1, 250V, max 2200pF, 25/125/21/B	IEC/EN 60384-14	VDE/ 40002831
Alt. use	Walsin Technology Corp.	AH	Y1, 250V, max 2200pF, 25/125/21/C	IEC/EN 60384-14	VDE/ 40001804
Alt. use	JYA-NAY Co., Ltd.	JN	Y1, 250V, max 2200pF, 25/125/21/C	IEC/EN 60384-14	VDE/ 40001831
Alt. use	Haohua Electronic Co.	CT 7	Y1, 250V, max 2200pF, 30/125/56/C	IEC/EN 60384-14	VDE/ 40003902
Alt. use	Jerro Electronics Corp.	JX-series	Y1, 250V, max 2200pF, 20/125/21	IEC/EN 60384-14	VDE/ 40032158
Varistor (MOV1, (optional)	Joyin Co., Ltd.	7N471K / 10N471K / 14N471K	Max continuous voltage: 300VAC, max peak current: 1200A / 2500A / 4500A, 40/85/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 005937
Alt. use	Centra Science Corp.	CNR-07D471K / CNR-10D471K / CNR-14D471K	Max continuous voltage: 300VAC, max peak current: 1200A / 2500A / 4500A, 40/085/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 40008220
Alt. use	Thinking Electronic Industrial Co., Ltd.	TVR07471 / TVR10471 / TVR14471	Max continuous voltage: 300VAC, max peak current: 1200A / 2500A / 4500A, 40/85/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 005944
Alt. use	Success Electronics Co., Ltd.	SVR07D471K / SVR10D471K / SVR14D471K	Max continuous voltage: 300VAC, max peak current: 1200A / 2500A / 4500A, 40/085/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 123677
Alt. use	Ceramate Techn. Co., Ltd.	GNR07D471K / GNR10D471K / GND14D471K	Max continuous voltage: 300VAC, max peak current: 1200A / 2500A / 4500A, 40/085/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 40021606
Alt. use	Brightking (Shenzhen) Co., Ltd.	07D471K / 10D471K / 14D471K	Max continuous voltage: 300VAC, max peak current: 500A / 1000A / 2000A, 40/85/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 40027827

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

Alt. use	Lien Shun Electronics Co., Ltd.	07D471K / 10D471K / 14D471K	Max continuous voltage: 300VAC, max peak current: 500A / 1000A / 2000A, 40/85/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 40005858
Alt. use	Hongzhi	HEL-07D471K HEL-10D471K HEL-14D471K	Max continuous voltage: 300VAC, max peak current: 500A / 1000A / 2000A, 40/85/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 40008621
Alt. use	New Future	07D471K 10D471K, 14D471K	Max continuous voltage: 300VAC, max peak current: 500A / 1750A / 2000A, 40/85/56	IEC 61051-1; IEC 61051-2; IEC 61051-2-2	VDE/ 40030322
Optocoupler (U1)	Everlight Electronics Co., Ltd.	EL817	Insulation voltage: 850Vp Transient overvoltage: 6000Vp Cr/Cl>=7,6mm 55/110/21	EN 60747-5-5	VDE/ 132249
Alt. use	Bright Led Electronics Corp.	BPC-817 B / BPC-817 M / BPC-817 S	Insulation voltage: 850Vp Transient overvoltage: 5000Vp Cr>Cl>=7,6mm 30/100/21	EN 60747-5-2	VDE/ 40007240
Alt. use	Lite-On Technology Corp.	LTV-817	Insulation voltage: 850V; Transient overvoltage: 6000V Cr>Cl>=7,6mm; 30/110/21	EN60747-5-2	VDE/ 40015248
Alt. use	Sharp	PC-817	Insulation voltage: 890V; Transient overvoltage: 9000V Cr>Cl>=7,6mm 30/100/21	IEC/EN60747-5-2	VDE/ 40008087
Alt. use	Cosmo Electronics Corp.	K1010, KP1010	Insulation voltage: 890V; Transient overvoltage: 6000V; CTI175; Cr>Cl>=7,6mm 55/100/21	EN60747-5-2	VDE/ 101347

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

Transformer (T1)	GlobTek/ BOAM/ ZhongTong	TF005	Class B, for model with 5-7V output	IEC 60335-1	Tested with appliance
Transformer (T1)	GlobTek/ BOAM/ ZhongTong	TF006	Class B, for model with 7,1-9V output	IEC 60335-1	Tested with appliance
Transformer (T1)	GlobTek/ BOAM/ ZhongTong	TF007	Class B, for model with 9,1-15V output	IEC 60335-1	Tested with appliance
Transformer (T1)	GlobTek/ BOAM/ ZhongTong	TF008	Class B, for model with 15,1-24V output	IEC 60335-1	Tested with appliance
Transformer (T1)	GlobTek/ BOAM/ ZhongTong	TF009	Class B, for model with 24,1-36V output	IEC 60335-1	Tested with appliance
Triple insulated wire	Great Leoflon Industrial Co., Ltd.	TRW (B) Serie(s)	Class B, reinforced insulation	IEC 60950-1	VDE/ 136581
Alt. use	COSMOLINK CO. Ltd.	TIW-M Serie(s)	Class B, reinforced insulation	IEC 60950-1	VDE/ 138053
Alt. use	Furukawa Electric Co., Ltd. Electronics & Automotive Systems Company Global Business Development Division	TEX-E	Class B, reinforced insulation	IEC 60950-1	VDE/ 006735
Alt. use	Totoku Electric Co. Ltd.	TIW-2	Class B, reinforced insulation	IEC 60950-1	VDE/ 40005152
Magnet wire	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWN/U (UL E201757)	MW28-C, 130°C	IEC 60335-1	Tested with appliance
Alt. use	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWS/U (UL E201757)	MW75-C, 130°C	IEC 60335-1	Tested with appliance
Alt. use	CHENG DU SOUTH-WEST ELECTRIC CO.,LTD	2UEW (UL E178366)	MW75#, 130°C	IEC 60335-1	Tested with appliance

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

Alt. use	JUNG SHING WIRE CO LTD	UEW-4 (UL E174837)	MW75C, 130°C	IEC 60335-1	Tested with appliance
Alt. use	JUNG SHING WIRE CO LTD	UEY-2 (UL E174837)	MW28-C, 130°C	IEC 60335-1	Tested with appliance
Alt. use	JIANGSU HONGLIU MAGNET WIRE TECHNOLOGY CO LTD	2UEW/130 (UL E335065)	MW75-C, 130°C	IEC 60335-1	Tested with appliance
Alt. use	CHANGZHOU DAYANG WIRE & CABLE CO LTD	2UEW/130 (UL E158909)	MW75-C, 130°C	IEC 60335-1	Tested with appliance
Alt. use	WUXI JUFENG COMPOUND LINE CO LTD	2UEWB (UL E206882)	MW75#, 130°C	IEC 60335-1	Tested with appliance
Alt. use	JIANGSU DARTONG M & E CO LTD	UEW (UL E237377)	MW 75-C, 130°C	IEC 60335-1	Tested with appliance
Alt. use	SHANDONG SAINT ELECTRIC CO LTD	UEW/130 (UL E194410)	MW75#, 130°C	IEC 60335-1	Tested with appliance
Alt. use	ZHEJIANG LANGLI ELECTRIC EQUIPMENTS CO LTD	UEW (UL E222214)	MW 79#, 130°C	IEC 60335-1	Tested with appliance
Alt. use	NINGBO JINTIAN NEW MATERIAL CO LTD	2UEW/130 (UL E227047)	MW75#, 130°C	IEC 60335-1	Tested with appliance
Alt. use	ZHEJIANG HONGLEI COPPER CO LTD	2UEW (UL E307975)	MW75#, 130°C	IEC 60335-1	Tested with appliance
Bobbin	CHANG CHUN PLASTICS CO LTD	T375J T375HF (UL E59481)	V-0, 150°C, min thickness: 0,45mm	IEC 60335-1	Tested with appliance
Alt. use	SUMITOMO BAKELITE CO LTD	PM-9820 (UL E41429)	V-0, 150°C, min thickness: 0,45mm	IEC 60335-1	Tested with appliance
Alt. use	HITACHI CHEMICAL CO LTD	CP-J-8800 (UL E42956)	V-0, 150°C, min thickness: 0,45mm	IEC 60335-1	Tested with appliance

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

Insulating tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 / 1350T-1 (UL E17385)	130°C	IEC 60335-1	Tested with appliance
Alt. use	BONDTEC PACIFIC CO LTD	370S (UL E175868)	130°C	IEC 60335-1	Tested with appliance
Alt. use	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ, CT (UL E165111)	130°C	IEC 60335-1	Tested with appliance
Alt. use	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A (UL E246950)	130°C	IEC 60335-1	Tested with appliance
Alt. use	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX (UL E24680)	130°C	IEC 60335-1	Tested with appliance

Supplementary information:

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

2)Detailed dimension of output cord for different models

For model output current 3A, Min. 18AWG;

For model output current 1,5-2,99A, Min. 20AWG;

For model output current 0-1,49A, Min. 24AWG

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

28.1	TABLE: Threaded part torque test		N/A
Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Supplementary information:			

29.1	TABLE: Clearances						P
	Overvoltage category .... :			II			—
		Type of insulation:					
Rated impulse voltage (V):	Min. cl (mm)	Basic (mm)	Supplementary (mm)	Reinforced (mm)	Functional (mm)	Verdict / Remark	
330	0,2* / 0,5 / 0,8**	—	—	—	×	P	
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***	×	×	—	×	P	
4 000	3,0 / 3,5***	—	—	×	—	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
Altitude 5000m is considered, the correction factor of 1.49 is multiplied based on above values..

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

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

≤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	×	—	—	**P**
250	0,56	1,25	1,8	**2,5**	3,2	3,6	4,0	—	×	—	**P**
250	1,12	2,5	3,6	**5,0**	6,4	7,2	8,0	—	—	×	**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
>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

IEC 60335-1											
Clause	Requirement - Test							Result - Remark			Verdict
>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
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											

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

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	**P**
50	0,16	0,56	0,8	**1,1**	1,4	1,6	1,8	**P**
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								

IEC 60335-1			
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: 105	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								te	ti	te	ti									
Enclosure	SABIC	SE1X	-	-	1,2	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Enclosure	SABIC	C2950	-	-	1,4	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Enclosure	SABIC	CX7211	-	-	1,3	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Enclosure	SABIC	EXCY0098	-	-	1,2	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Enclosure	Tejin	LN-1250P	-	-	1,1	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Enclosure	Tejin	LN-1250G	-	-	1,3	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Enclosure	CHI MEI	PA-765A	-	-	1,4	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Enclosure	CHI MEI	PC-540	-	-	1,5	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass
Epoxy resin	POCHELY	HB-5225A/B	-	-	1,8	-	NI	-	-	-	-	-	-	-	-	-	-	-	-	Pass

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

30	**TABLE: Resistance to heat and fire (continued)**																			
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: 150	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								te	ti	te	ti									
Bobbin	Chang Chun	T375J	-	-	1,6	-	-	-	-	-	-	NI	-	-	-	-	-	-	-	Pass
Bobbin	Chang Chun	T375HF	-	-	1,6	-	-	-	-	-	-	NI	-	-	-	-	-	-	-	Pass
Bobbin	Sumitomo	PM-9820	-	-	1,8	-	-	-	-	-	-	NI	-	-	-	-	-	-	-	Pass
Bobbin	HITACHI	CP-J-8800	-	-	1,7	-	-	-	-	-	-	NI	-	-	-	-	-	-	-	Pass
Terminal block	Dinkle	EK381A-02P	-	-	1,6	-	-	-	-	-	-	NI	-	-	-	-	-	-	-	Pass
Terminal block	Kaifeng	KF10H	-	-	1,6	-	-	-	-	-	-	NI	-	-	-	-	-	-	-	Pass

IEC 60335-1			
Clause	Requirement - Test	Result - Remark	Verdict

30 **TABLE: Resistance to heat and fire (continued)**

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: 150	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								te	ti	te	ti									
PCB	Techni	T2A	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	Techni	T2B	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	Techni	T4	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	HE TONG	CEM1	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	HE TONG	2V0	-	-	0,9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	CHEERFUL	02	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	CHEERFUL	03	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	CHEERFUL	03A	-	-	0,9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	DAYSUN	DS2	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	YILIHUA	YLH-1	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass

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Clause	Requirement - Test	Result - Remark	Verdict

30 **TABLE: Resistance to heat and fire (continued)**

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: 150	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								te	ti	te	ti									
PCB	YILIHUA	YLH-2	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	AREX	02V0	-	-	0,9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	AREX	04V0	-	-	0,9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	BRITE	DKV0-3A	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass
PCB	TONGCHUANG	TCX	-	-	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pass

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] NI means no ignition.