



Test Report issued under the responsibility of:



## TEST REPORT

IEC 60335-2-23

### Part 1: Safety of household and similar electrical appliances

### Part 2: Particular requirements for appliances for skin or hair care

Report Number. ....: NBES170901552802-M1

Date of issue .....: 2017-09-27, Modification No.1: 2018-09-29

Total number of pages..... 25

Name of Testing Laboratory preparing the Report.....: SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

Applicant's name.....:

Address .....

#### Test specification:

Standard .....: IEC 60335-2-23:2003 (Fifth Edition) incl. Corr.2:2008 + A1:2008 + A2:2012 in conjunction with  
IEC 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and  
Corr. 2:2011 + A1:2013

Test procedure .....: CB Scheme

Non-standard test method .....: N/A

Test Report Form No.....: IEC60335\_2\_23H

Test Report Form(s) Originator ....: VDE Testing and Certification Institute

Master TRF .....: Dated 2015-06

**Copyright © 2015 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved.**

This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

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

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

#### General disclaimer:

The test results presented in this report relate only to the object tested.

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

<b>Test item description</b> ..... :	Facial Sauna		
<b>Trade Mark</b> ..... :	None		
<b>Manufacturer</b> .....	Same as applicant		
<b>Model/Type reference</b> .....	MWFS511, MWFS518, MWFS518-1, MWFS518-2, MWFS518-3		
<b>Ratings</b> .....	MWFS518, MWFS518-1, MWFS518-2: 220 V - 240 V; 50 Hz / 60 Hz; 100 W; Class II; MWFS511, MWFS518-3: 220 V - 240 V; 50 Hz; 100 W; Class II		
<b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b>			
<input checked="" type="checkbox"/>	<b>CB Testing Laboratory:</b>	SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch	
<b>Testing location/ address</b> ..... :		1-5/F West No. 4 Building, Lingyun Industry Park, No. 1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, Zhejiang, China	
<input type="checkbox"/>	<b>Associated CB Testing Laboratory:</b>	N/A	
<b>Testing location/ address</b> ..... :			
<b>Tested by (name, function, signature)</b> .....		Peterman Pan, PE	<i>Peterman Pan</i>
<b>Approved by (name, function, signature)</b> ...		Leo Du, Reviewer	<i>Leo Du</i>
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 1:</b>	N/A	
<b>Testing location/ address</b> ..... :			
<b>Tested by (name, function, signature)</b> .....			
<b>Approved by (name, function, signature)</b> ...			
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 2:</b>	N/A	
<b>Testing location/ address</b> ..... :			
<b>Tested by (name + signature)</b> .....			
<b>Witnessed by (name, function, signature) . :</b>			
<b>Approved by (name, function, signature)</b> ...			
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 3:</b>	N/A	
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 4:</b>	N/A	
<b>Testing location/ address</b> ..... :			
<b>Tested by (name, function, signature)</b> .....			
<b>Witnessed by (name, function, signature) . :</b>			
<b>Approved by (name, function, signature)</b> ...			
<b>Supervised by (name, function, signature) :</b>			

<b>List of Attachments (including a total number of pages in each attachment):</b> 1. Annex I – European Group Difference and National Differences – attachment 2 pages 2. Annex II – Photo Documentation – attachment 1 page	
<b>Summary of testing:</b>	
<b>Tests performed (name of test and test clause):</b> The tested samples complied with the requirements of the test specification.  After review, tests of cl.10, 11, 13 and 19 were performed on model MWFS518 with alternative heating element. Tests of cl.10, 11, 13, 19.2 and 19.3 were performed on model MWFS518-1 with alternative heating element.	<b>Testing location:</b>  SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch 1-5/F West No. 4 Building, Lingyun Industry Park, No. 1177 Lingyun Road, Ningbo National Hi-Tech Zone, Ningbo, Zhejiang, China
<b>Summary of compliance with National Differences (List of countries addressed):</b> - EU Group Differences - Germany (no National Differences have been published in the CB Bulletin) EK decisions according to German ProdSG have been taken into account. PAH risk evaluation according to AfPS GS 2014:01 PAK: see PAH risk assessment report No. NBES170901552801/PAH. The following EK decisions were considered applicable: EK1 479-10, EK1 601-15 The product fulfils the above requirements. <input checked="" type="checkbox"/> <b>The product fulfils the requirements of <u>EN 60335-2-23:2003 + A1:2008 + A11:2010 + A2:2015; EN 60335-1:2012 + A11:2014 + A13:2017; EN 62233:2008</u></b>	
<b>Copy of marking plate:</b> Copies of marking plates were not changed	

<b>Test item particulars</b> .....: Facial Sauna	
<b>Classification of installation and use</b> .....: Portable appliance	
<b>Supply Connection</b> .....: Type Y attachment (non-detachable cord with plug) .....:	
<b>Possible test case verdicts:</b> - 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)	
<b>Testing</b> .....: <b>Date of receipt of test item</b> .....: 2018-09-05 <b>Date (s) of performance of tests</b> .....: 2018-09-05 to 2018-09-29	
<b>General remarks:</b>	
<p>"(See Annex #)" refers to additional information appended to the report.  "(See appended table)" refers to a table appended to the report.</p> <p><b>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</b>  This document is issued by the Company subject to its General Conditions of Service, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.</p> <p>Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 1 month only.</p>	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60335-1:</b>	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....:	<input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>Not applicable</b>
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>Name and address of factory (ies)</b> .....: Same as applicant	

**General product information:**

Facial Sauna for household and indoor use only.

There were 5 models in this report:

Model MWFS518 and model MWFS511 shared the same principle and similar construction except for the different appearance.

Model MWFS518-2 was the same as MWFS518 except for decorative parts of appearance and the colour of accessories.

Model MWFS518-1 was the same as model MWFS518-2 except for that MWFS518-1 had an anion generator.

Model MWFS518-3 was the same as MWFS518 except for decorative parts of appearance, the colour of accessories, ratings.

**Modification 1 Report NBES170901552802-M1:**

The original test report NBES170901552801, dated 2017-09-27 was modified on 2018-09-29 to include the following changes and additions, which are considered technical modification:

1. An alternative PTC heating element was added for MWFS518, MWFS518-1, MWFS518-2 and MWFS518-3, which was tested with appliance. See photo documentation and updated table 24.1 for details.
2. The requirements of EN 60335-1:2012/A13:2017 were evaluated.

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
<b>10</b>	<b>POWER INPUT AND CURRENT</b>		—
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1 .:	(see appended table)	P
	If the power input varies throughout the operating cycle and the maximum value of the power input exceeds, by a factor greater than two, the arithmetic mean value of the power input occurring during a representative period, the power input is the maximum value that is exceeded for more than 10 % of the representative period. (IEC 60335-1:2010/A1:2013)		N/A
	Otherwise the power input is the arithmetic mean value (IEC 60335-1:2010/A1:2013)		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		P
	Representative period for appliances incorporating PTC heating elements is 30 min. (IEC 60335-2-23/A2)		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 .....		N/A
	If the current varies throughout the operating cycle and the maximum value of the current exceeds, by a factor greater than two, the arithmetic mean value of the current occurring during a representative period, the current is the maximum value that is exceeded for more than 10 % of the representative period. (IEC 60335-1:2010/A1:2013)		N/A
	Otherwise the current is the arithmetic mean value. (IEC 60335-1:2010/A1:2013)		N/A
	Test carried out at upper and lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated current is related to the arithmetic mean value of the range		N/A
	Representative period for appliances incorporating PTC heating elements is 30 min. (IEC 60335-2-23/A2)		N/A
<b>11</b>	<b>HEATING</b>		—
11.1	No excessive temperatures in normal use		P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	For appliances incorporating swivel connection, compliance also checked by test of clause 11.101 (IEC 60335-2-23)		N/A
11.2	The appliance is held, placed or fixed in position as described .....	Held in normal use position	P
	Appliances intended to be used on a stand or attached to a support placed to give most unfavourable results (IEC 60335-2-23)		P
	Hand-held appliances with an integral rest are also tested when placed on their rest away from the walls of the test corner. (IEC 60335-2-23/A2)		N/A
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		N/A
	the windings are non-uniform or it is difficult to make the necessary connections		N/A
11.4	Heating appliances operated under normal operation at 1,15 times rated power input (W) .....	1,15 <sup>1/2</sup> × 240 = 257,4 V	P
	Temperature rise limits exceeded in appliances incorporating motors, transformers or electronic circuits, and power input is lower than rated power input, test repeated with appliance supplied at 1,06 times rated voltage (IEC 60335-2-23)		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0,94 and 1,06 times rated voltage (V) .....		N/A
11.6	Combined appliances operated as heating appliances (IEC 60335-2-23)		N/A
11.7	Appliances without timer operated (IEC 60335-2-23):		—
	- for 30 min, for hand-held appliances (IEC 60335-2-23);		N/A
	- in cycles of 30 s on and 5 s off until steady conditions established, for hand dryers that automatically controlled by presence of hands (IEC 60335-2-23);		N/A
	- until steady conditions established, for other appliances (IEC 60335-2-23).		P
	Appliances incorporating timer operated in cycles until steady conditions established. Each cycle consists of maximum operating time of timer (min) followed by rest period of 5 s (IEC 60335-2-23).....		N/A
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 .....	(see appended tables)	P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of annex C are carried out		N/A
	Sealing compound does not flow out		N/A
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
	Temperature rise limits of motors, transformers and components of electronic circuits, including parts directly influenced by them, be exceeded when appliance operated at 1,15 times rated power input (IEC 60335-2-23)		N/A
	Temperature rise of handles of curling irons heated by heater for detachable curlers incorporating a timer determined at end of first cycle (IEC 60335-2-23)		N/A
11.101	Appliances incorporating a swivel connection positioned with their major axis horizontal, supply cord hanging vertically. Pull force of 1 N applied to supply cord (IEC 60335-2-23)		N/A
	Appliance supplied at rated voltage, current being 1,25 times rated current (IEC 60335-2-23)		N/A
	Appliance rotated about its major axis at rate of approximately 50 rev/min, direction of rotation being reversed every 20 rev. Test carried out for 1500 rev (IEC 60335-2-23)		N/A
	Temperature rise of sliding contacts not exceed 65 K (IEC 60335-2-23)		N/A
<b>13</b>	<b>LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE</b>		—
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1,15 times the rated power input (W).....:	1,15 <sup>1/2</sup> x240=257,4 V	P
	Motor-operated appliances and combined appliances supplied at 1,06 times the rated voltage (V).....:		N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
13.2	For class 0, class II and class III appliances, and class II constructions, leakage current measured by means of the circuit described in figure 4 of IEC 60990 (IEC 60335-1:2010/A1:2013)	Class II appliance	P
	For class 0I and class I appliances, a low impedance ammeter may be used (IEC 60335-1:2010/A1:2013)		N/A
	Leakage current measurements .....: (IEC 60335-1:2010/A1:2013)	(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
<b>19</b>	<b>ABNORMAL OPERATION</b>		—
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 cl.19.11.2)	See cl.19.11.2	P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		P
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		N/A
	if applicable, to the test of 19.5		N/A
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		P
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		N/A
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		N/A
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
	Appliances incorporating voltage selector switches subjected to the test of 19.15		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

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A
	Hairdryers also subjected to tests of clause 19.101 and 19.102 (IEC 60335-2-23)		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) .....:	until steady condition were established (see appended table)	P
	Restricted heat dissipation is obtained as follows (IEC 60335-2-23):		—
	- motors disconnected (IEC 60335-2-23);		N/A
	- hand-held hairdryers placed on floor of test corner in any stable position likely to occur (IEC 60335-2-23);		N/A
	- appliances intended to be filled with water operated empty (IEC 60335-2-23).		P
	- hand-held appliances without an integral rest are placed on the floor of the test corner in any stable position likely to occur (IEC 60335-2-23/A2).		N/A
	Hairdryers with flexible hood attachment also tested with motor operating, airflow through hose being restricted to give most unfavourable result (IEC 60335-2-23)		N/A
	Heaters for detachable curlers placed on piece of low-density glass-fibre insulation having coefficient of thermal insulation of approximately 2,5 m <sup>2</sup> K/W (IEC 60335-2-23)		N/A
19.3	Test of 19.2 repeated; test voltage (V), power input of 1,24 times rated power input (W) .....:	until steady conditions were established (see appended table)	P
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		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		P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	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).....:	Until 1,5 times working voltage (see appended table)	P
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque, or		N/A
	locking moving parts of other appliances		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, unless		N/A
	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
	An electronic timer or programmer that operates to ensure compliance with the test before the maximum period under the conditions of Clause 11 is reached, is a protective electronic circuit (IEC 60335-1:2010/A1:2013)		N/A
	Test carried out for 5 min except for (IEC 60335-2-23):		—
	- hand-held appliances (IEC 60335-2-23);		N/A
	- appliances have to be kept switched on by hand (IEC 60335-2-23);		N/A
	- appliances incorporating a timer (IEC 60335-2-23).		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		N/A
19.10	Series motor operated at 1,3 times rated voltage for 1 min (V).....:		N/A
	Test carried out with heating elements disconnected or switched off (IEC 60335-2-23)		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

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	they comply with the conditions specified in 19.11.1		N/A
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		N/A
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N/A
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		N/A
	During and after each test the following is checked:		—
	- the temperature of the windings do not exceed the values specified in table 8		N/A
	- 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		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		—
	- the base material of the printed circuit board withstands the test of annex E		N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.1	Fault conditions a) to g) in 19.11.2 are not applied to circuits or parts of circuits meeting both of the following conditions:		—
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified		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		N/A
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:		—

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N/A
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless		N/A
	they comply with IEC 60384-14		N/A
	d) short circuit of any two terminals of an electronic component, other than integrated circuits		P
	This fault condition is not applied between the two circuits of an optocoupler		N/A
	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		N/A
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		N/A
	a device that can be placed in the stand-by mode,		N/A
	subjected to the tests of 19.11.4.1 to 19.11.4.7, the device being set in the off position or in the stand-by mode		N/A
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, the tests being carried out after the protective electronic circuit has operated, except that		N/A
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		N/A
	Surge protective devices disconnected, unless		N/A
	They incorporate spark gaps		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		N/A

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		N/A
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		N/A
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		N/A
	An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode (IEC 60335-1:2010/A1:2013)		N/A
	An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling (IEC 60335-1:2010/A1:2013)		N/A
	Earthed heating elements in class I appliances disconnected		N/A
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		N/A
19.11.4.6	Appliances having a rated current not exceeding 16 A are subjected to the class 3 voltage dips and interruptions in accordance with IEC 61000-4-11		N/A
	Appliances having a rated current exceeding 16 A are subjected to the class 3 voltage dips and interruptions in accordance with IEC 61000-4-34		N/A
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		N/A
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60 s the power supply is reduced to a level such that the appliance ceases to respond or parts controlled by the programmable component cease to operate		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).....:		N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9 .....	(see appended table)	P

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		N/A
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		—
	- basic insulation (V) .....	1000 V	P
	- supplementary insulation (V) .....	1750 V	P
	- reinforced insulation (V) .....	3000 V	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		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		—
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		—
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
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		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

IEC 60335-2-23			
Clause	Requirement + Test	Result - Remark	Verdict
19.15	For appliances with a mains voltage selector switch, the switch is set to the lowest rated voltage position and the highest value of rated voltage is applied		N/A
19.101	Hairdryers operated as specified in clause 11 until steady conditions established (IEC 60335-2-23/A1)		N/A
	Voltage at terminals of motor reduced until running speed of motor is just sufficient to prevent thermal cut-out from operating, power input to heating element being maintained at 1,15 times rated power input (IEC 60335-2-23/A1)		N/A
	Voltage is decreased at (IEC 60335-2-23/A1)		—
	- 1 V/min, for motors with working voltage not exceeding 30 V (IEC 60335-2-23/A1);		N/A
	- 5 V/min, for motors with working voltage exceeding 30 V (IEC 60335-2-23/A1).		N/A
	Appliance operated until steady conditions established (IEC 60335-2-23/A1)		N/A
19.102	Portable hair dryers operated under normal operation at 1,15 times rated power input (IEC 60335-2-23)		N/A
	Sheet of polyethylene approximately 200 mm x 200 mm and having thickness of 50 µm placed against air-inlet and moved in any direction in order to reduce airflow so that most unfavourable conditions established (IEC 60335-2-23)		N/A
	Test carried out for 30 min (IEC 60335-2-23)		N/A
	Test repeated with airflow directed horizontally (IEC 60335-2-23)		N/A

## IEC 60335-2-23

10.1	TABLE: Power input deviation					P
Input deviation of/at:	P rated (W)	P measured (W)	$\Delta P$	Required $\Delta P$	Remark	
230 V, 50 Hz	100	95,7	-4,3 %	$\pm 10$ %	MWFS518 with alternative heating element	
230 V, 50 Hz	100	95,0	-5,0 %	$\pm 10$ %	MWFS518-1 with alternative heating element	

11.8 (1)	TABLE: Heating test (MWFS518 with alternative heating element)			P
	Test voltage (V) .....	1,15 <sup>1/2</sup> x240=257,4 V		—
	Ambient (°C) .....	T1=23,0 °C, T2=23,6 °C		—
Thermocouple locations		Max. temperature rise measured, $\Delta T$ (K)	Max. temperature rise limit, $\Delta T$ (K)	
Supply cord insulation		20,4	50	
Internal wire (near heating element)		57,7	175 (T200-25)	
Internal wire (near power switch)		18,4	175 (T200-25)	
Silicone tube for internal wire		50,0	145	
Insulation tape		93,9	Ref.	
Ambient of power switch		24,2	80 (T105-25)	
Enclosure (near heating element, inside)		19,0	Ref.	
Enclosure (bottom)		16,1	Ref.	
Water container support		75,9	Ref.	
LED cover		16,9	Ref.	
Power switch knob		20,4	Ref.	
Power switch knob surface		10,3	60	
Above lid surface		11,1	60	
Nozzle surface		15,3	60	
Test corner		11,2	65	

11.8 (2)	TABLE: Heating test (MWFS518-1 with alternative heating element)			P
	Test voltage (V) .....	1,15 <sup>1/2</sup> x240=257,4 V		—
	Ambient (°C) .....	T1=23,2 °C, T2=22,7 °C		—
Thermocouple locations		Max. temperature rise measured, $\Delta T$ (K)	Max. temperature rise limit, $\Delta T$ (K)	
Supply cord insulation		21,8	50	
Internal wire (near heating element)		60,6	175 (T200-25)	

IEC 60335-2-23		
Internal wire (near thermal cut-out)	21,9	175 (T200-25)
Silicone tube for internal wire	70,4	145
Ambient of power switch	35,4	80 (T105-25)
Enclosure (near heating element, inside)	23,6	Ref.
Enclosure (bottom)	14,0	Ref.
Water container support (near PTC heating element)	86,9	Ref.
LED cover	22,7	Ref.
Power switch knob (inside)	19,4	Ref.
Power switch knob surface	15,8	60
Above lid surface	13,3	60
Nozzle surface	18,0	60
Test corner	13,8	65

13.2	TABLE: Leakage current		P
	Heating appliances: 1,15 x rated input (W).....:	1,15 <sup>1/2</sup> x240=257,4 V	—
	Motor-operated and combined appliances: 1,06 x rated voltage (V).....:	—	—
Leakage current between		I (mA)	Max. allowed I (mA)
Between L/N and accessible parts (plastic surface, knob surface) (MWFS518)		0,01	0,35 peak
Between L/N and accessible parts (plastic surface, knob surface) (MWFS518-1)		0,01	0,35 peak

13.3	TABLE: Dielectric strength		P
Test voltage applied between:		Test potential applied (V)	Breakdown / flashover (Yes/No)
Between live part and internal wire insulation (MWFS518)		1000	No
Internal wire and accessible surface (plastic surface, knob surface) (MWFS518)		1750	No
Between live part and accessible surface (plastic surface, knob surface) (MWFS518)		3000	No
Between live part and internal wire insulation (MWFS518-1)		1000	No
Internal wire and accessible surface (plastic surface, knob surface) (MWFS518-1)		1750	No
Between live part and accessible surface (plastic surface, knob surface) (MWFS518-1)		3000	No

## IEC 60335-2-23

19	Abnormal operation conditions						P
Operational characteristics		YES/NO	Operational conditions				
Are there electronic circuits to control the appliance operation?		No	N/A				
Are there "off" or "stand-by" position?		No	N/A				
The unintended operation of the appliance results in dangerous malfunction?		N/A	N/A				
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	0,85x220=187 V	No hazards	N/A	N/A	N/A	N/A	P
19.3	1,24 <sup>1/2</sup> x240=267,3 V	No hazards	N/A	N/A	N/A	N/A	P
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	240 V	No hazards	N/A	N/A	N/A	N/A	P
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	240 V	No hazards	N/A	N/A	N/A	N/A	P
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

19.13 (1)	TABLE: Abnormal operation, temperature rises (MWFS518 with alternative heating element)						P
Thermocouple locations	Max. temperature rise measured, Δ T (K)			Max. temperature rise limit, Δ T (K)			
	19.2	19.3	19.6				
Supply cord insulation	20,7	22,8	24,2	150			
Test corner	11,5	12,8	17,0	150			
Enclosure	21,3	22,9	22,1	Ref.			
Bottom enclosure	16,3	18,2	21,5	Ref.			
Water container support	110,1	112,6	77,8	Ref.			
LED cover	20,7	17,5	21,2	Ref.			
Power switch button	10,5	12,2	12,8	Ref.			

## IEC 60335-2-23

19.13 (2)	TABLE: Abnormal operation, temperature rises (MWFS518-1 with alternative heating element)			P
Thermocouple locations	Max. temperature rise measured, Δ T (K)		Max. temperature rise limit, Δ T (K)	
	19.2	19.3		
Supply cord insulation	20,0	20,0	150	
Test corner	14,0	14,5	150	
Enclosure	16,0	19,5	Ref.	
Bottom enclosure	14,0	18,7	Ref.	
Water container support	120,1	123,9	Ref.	
LED cover	21,8	22,5	Ref.	
Power switch button	15,6	15,8	Ref.	

24.1	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1)</sup>	
Plug	Ningbo Qiaopu Electric Co., Ltd. (Trade mark: QIAOTONG)	D01	250 V~, 2,5 A, 2P	DIN VDE 0620-101 (1992) EN 50075 (1990) IEC 60884-1	VDE* (40001746)	
(Alternative)	Ningbo Chaoyu Electric Appliance co., Ltd	CY01	250 V~, 2,5 A, 2P	DIN VDE 0620-101 (1992) EN 50075 (1990) IEC 60884-1	VDE* (40037132)	
(Alternative)	Shangyu Jintao Electron Co., Ltd	JT001	250 V~, 2,5 A, 2P	DIN VDE 0620-101 (1992) EN 50075 (1990) IEC 60884-1	VDE* (40020667)	
BS plug	Hangzhou Hongshi Electrical Co., Ltd	SW238	250 V~, 13 A	BS 1363-1 (2012)	Intertek* (726)	
(Alternative)	Hangzhou Hongshi Electrical Co., Ltd	SW168 SW368 SW368II	250 V~, 13 A	BS 1363-1 (2012)	BSI* (KM 10807)	
(Alternative)	Dongguan Marsh Electric Appliance Co., Ltd	1906 1908	250 V~, 13 A	BS 1363-1 (2012)	Intertek* (1237)	
(Alternative)	Ningbo Qiaopu Electric Co., Ltd	D09	250 V~, 13 A	BS 1363-1 (2012)	Intertek* (930)	
(Alternative)	Ningbo Xuanhua Electric Appliance Co., Ltd	XH031A XH031B XH031C	250 V~, 13 A	BS 1363-1 (2012)	ASTA* (1118)	
(Alternative)	Yuyao City Dongdong Electrical Appliance Factory	Y006 Y006-A	250 V~, 13 A	BS 1363-1 (2012)	ASTA* (1199)	

IEC 60335-2-23					
Supply cord	Ningbo Qiaopu Electric Co., Ltd. (Trade mark: QIAOTONG)	H03VVH2-F	2x0,5 mm <sup>2</sup> (Length≤2 m)	EN 50525-2-11 (2011) IEC 60227	VDE* (40035976)
(Alternative)	Ningbo Yuxin Electrical Appliance Co., Ltd	H03VVH2-F	2x0,5 mm <sup>2</sup> (Length≤2 m)	EN 50525-2-11 (2011) IEC 60227	VDE* (40010786)
(Alternative)	Ningbo Liansheng Wire & Cable Co., Ltd	H03VVH2-F	2x0,5 mm <sup>2</sup> (Length≤2 m)	EN 50525-2-11 (2011) IEC 60227	VDE* (40022054)
(Alternative)	Shangyu Jintao Electron Co., Ltd	H03VVH2-F	2x0,5 mm <sup>2</sup> (Length≤2 m)	EN 50525-2-11 (2011) IEC 60227	VDE* (40013419)
(Alternative)	Yuyao Yingjia Electric Appliance Co., Ltd	H03VVH2-F	2x0,5 mm <sup>2</sup> (Length≤2 m)	EN 50525-2-11 (2011) IEC 60227	VDE* (40035260)
(Alternative)	Hangzhou Hongshi Electrical Co., Ltd	H03VVH2-F	2x0,5 mm <sup>2</sup> (Length≤2 m)	EN 50525-2-11 (2011) IEC 60227	VDE* (40010839)
(Alternative)	Ningbo Chaoyu Electric Appliance co., Ltd	H03VVH2-F	2x0,5 mm <sup>2</sup> (Length≤2 m)	EN 50525-2-11 (2011) IEC 60227	VDE* (40034480)
Fuse-link	Walter Electronic Co., Ltd	FSD	250 V~, 5 A, F	EN 60127-1 (2006) EN 60127-2 (2003) IEC 60127-1 IEC 60127-2	VDE* (40016929)
(Alternative)	Shenzhen Lanson Electronics Co. Ltd	5J F5AL250V	250 V~, 5 A, F	EN 60127-1 (2006) EN 60127-2 (2003) IEC 60127-1 IEC 60127-2	VDE* (40009306)
(Alternative)	XC Electronics (Shen Zhen) Corp. Ltd	5F	250 V~, 5 A, F	EN 60127-1 (2006) EN 60127-2 (2003) IEC 60127-1 IEC 60127-2	VDE* (40009609)
Power switch (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)	Long Jie Electronic Fittings Factory	KAG-3	250 V~, 10 A, T125, 1E4	EN 61058-1 (2008) IEC 61058-1	TUV* (R 50150850)

IEC 60335-2-23					
(Alternative) (MWFS518, MWFS518-1 MWFS518-2, MWFS518-3)	Dong Guan Legion Electronic & Hardware Co., Ltd	FR01 Series	250 V~, 6 A, T125, 1E4	EN 61058-1 (2008) IEC 61058-1	ENEC17* (NO3692)
(Alternative) (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)	Zhejiang Dawei Electrical Co., Ltd	DXS02	250 V~, 6 A, T125, 1E4	EN 61058-1 (2008) IEC 61058-1	TUV* (R 50123357)
(Alternative) (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)	Yueqing Niufulai Electronics Co., Ltd	KFZ-03-01	250 V~, 6 A, T150, 1E4	EN 61058-1 (2008) IEC 61058-1	TUV* (R 50192428)
(Alternative) (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)	Towei Electronics Co., Ltd	B3200	250 V~, 10(3) A T105, 1E4	EN 61058-1 (2008) IEC 61058-1	TUV* (R 50118948)
Power switch (for MWFS511)	Yueqing Weite Electronic Co., Ltd	KCD1	250 V~, 6 A T105, 1E4	EN 61058-1 (2008) IEC 61058-1	VDE* (40029666)
(Alternative) (for MWFS511)	Yueqing Niufulai Electronics Co., Ltd	KCD1 B6	250 V~, 6 A, T125/55, 1E4	EN 61058-1 (2008) IEC 61058-1	TUV* (R 50163367)
Thermal cut- out (for MWFS511, MWFS518, MWFS518-1, MWFS518-2)	Zhongshan Chang Hong Thermal Protectors Co., Ltd	RS-130	250 V~, 10 A, Tf130 °C, 6E3	EN 60730-2-9 (2000) EN 60730-1 (2002) IEC 60730-2-9 IEC 60730-1	VDE* (40014422)
(Alternative) (for MWFS511, MWFS518, MWFS518-1, MWFS518-2)	Yangzhou Temguard Electric Appliances Co., Ltd	KY11 BS130°C	250 V~, 6 A, Tf130 °C, 1E4	EN 60730-2-9 (2010) EN 60730-1 (2011) IEC 60730-2-9 IEC 60730-1	VDE* (40032175)
(Alternative) (for MWFS511, MWFS518, MWFS518-1, MWFS518-2)	Yangzhou Baozhu Electric Appliance Co., Ltd	TB02	250V ~, 2 A, Tf130 °C, 6E3	EN 60730-2-9 (2002) EN 60730-1 (2000) IEC 60730-2-9 IEC 60730-1	TUV* (R 50110965)
(Alternative) (for MWFS511, MWFS518, MWFS518-1, MWFS518-2)	Nanjing Haichuan Electronic Co., Ltd	TB02-130B	250 V ~, 2,5 A, Tf130 °C, 1E4	EN 60730-2-9 (2010) EN 60730-1 (2011) IEC 60730-2-9 IEC 60730-1	TUV* (R 50306515)

IEC 60335-2-23					
(Alternative) (for MWFS511, MWFS518, MWFS518-1, MWFS518-2)	Huai'an Bok Electrical Appliances Co., Ltd	BK05-BB5D	250 V ~, 5 A , Tf130 °C , 1E4	EN 60730-2-9 (2010) EN 60730-1 (2008) IEC 60730-2-9 IEC 60730-1	TUV* (B 16 02 94822 001)
Thermal cut- out (for MWFS518- 3)	Yangzhou Baozhu Electric Appliance Co., Ltd.	TB11-BY5D	250 V~, Tf 130 °C	EN 60730-2-2 (2005) EN 60730-1 (2011) IEC 60730-2-2 IEC 60730-1	VDE* (40039391)
Internal wire	Zhejiang Chengbao Wire & Cable Co., Ltd	1332	300 V, 200 °C, 22 AWG	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1 UL 758	UL* (E315651) + tested with appliance
(Alternative)	Guangzhou Tang Yao Wires Co., Ltd	1332	300 V, 200 °C, 22 AWG	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1 UL 758	UL* (E207696) + tested with appliance
(Alternative)	Zhejiang Ironflon (Teflon) Wire & Cable Co., Ltd	1332	300 V, 200 °C, 22 AWG	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1 UL 758	UL* (E252458) + tested with appliance
Silicone tube	Shenzhen Wahchangwei Industrial Co., Ltd	SGS-15	VW-1	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1 UL 1441	UL* (E233804) + tested with appliance
Insulating tape	Changshu Changjiang Tape Co., Ltd	K-CJ01	260 °C	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	UL* (E300797) + tested with appliance

IEC 60335-2-23					
Heat-shrinkable tube	Dongguan Salipt Co., Ltd	SALIPT S-901-600	600 V, 125 °C, VW-1	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1 UL 224	UL* (E209436) + tested with appliance
PTC heating element (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)	Yuyao Jiuge Electrical Accessories Factory	MW218	31x11x2,3 mm, 2 pieces, tested at 220 V – 240 V	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance
<b>(Alternative) (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)</b>	<b>HaiNing YongLi Electronic Ceramic Co., Ltd.</b>	<b>MW218</b>	<b>31x11x2,3 mm, 2 pieces, tested at 220 V – 240 V</b>	<b>EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1</b>	<b>Tested with appliance</b>
PTC heating element (for MWFS511)	Haining Yongli Electronic Ceramic Co., Ltd	MZF241524S 270-110/220	24x15x2,4 mm, 2 pieces, tested at 220 V – 240 V	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance
Negative ion generator (only for MWFS518-1)	Cixi Honge Electric Appliances Co., Ltd	FF-351A	100-240 V~, 50 / 60Hz, 1 W	EN 60335-2-65 (2015) EN 60335-1 (2017) IEC 60335-2-65 IEC 60335-1	TUV* (R 50124797)
Enclosure / bottom enclosure (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)		ABS (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3) PP (for MWFS511)	Min. thickness: 2,0 mm	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance
Enclosure / bottom enclosure (for MWFS511)		PP	Min. thickness: 2,0 mm	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance
Power switch knob (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)		ABS	Min. thickness: 1,3 mm	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance

IEC 60335-2-23					
Power switch button / indicator cover (for MWFS511)		PC	Min. thickness: 1,3 mm	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance
Water container support (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)		PET	Min. thickness: 2,1 mm	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance
LED cover (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)		PC	Min. thickness: 1,2 mm	EN 60335-2-23 (2015) EN 60335-1 (2017) IEC 60335-2-23 IEC 60335-1	Tested with appliance
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

**<End of Report>**

Annex I: IEC60335_2_23H			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ATTACHMENT TO TEST REPORT IEC 60335-2-23</b> <b>EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES</b> Part 2-23: Particular requirements for appliances for skin or hair care	
<b>Differences according to.....:</b>	EN 60335-2-23:2003 + A1:2008 + A11:2010 + A2:2015 EN 60335-1:2012+AC:2014 + A11:2014 EN 62233:2008 (incl. Corr.:2008)
<b>Attachment Form No.....:</b>	EU_GD_IEC60335_2_23H_II
<b>Attachment Originator.....:</b>	VDE
<b>Master Attachment.....:</b>	Date (2015-11)
<b>Copyright © 2015 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.</b> Remark: Appendix 1 – The requirements of EN 60335-1:2012/A13:2017	

	Group/CENELEC Common Differences to IEC 60335-1, IEC 60335-2-23	—
11.8	During the test, the temperature rises are monitored continuously and shall not exceed the values shown in Table 3 and Table Z101. (EN 60335-2-23/A2)	(see appended tables) P
	In Table 3 delete the row “External enclosure of motor-operated appliances, except handles held in normal use” and the corresponding footnotes. (EN 60335-2-23/A2)	N/A
19.2	- ... hand-held appliances are placed on a piece of low density glass-fibre insulation having a coefficient of thermal insulation of approximately 2,5 m² K/W; (EN 60335-2-23/A11)	N/A

Appendix 1 – The requirements of EN 60335-1:2012/A13:2017		
<b>ZC</b>	<b>ANNEX ZC (NORMATIVE)</b> <b>NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS</b>	—
	A list of documents referred to in the text of this standard in such a way that some or all of their content constitutes requirements of this document	P
<b>ZZA</b>	<b>ANNEX ZZA (INFORMATIVE)</b> <b>RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE SAFETY OBJECTIVES OF DIRECTIVE 2014/35/EU [2014 OJ L96] AIMED TO BE COVERED</b>	—
	This standard provides one means of conforming to safety objectives of Directive 2014/35/EU	P

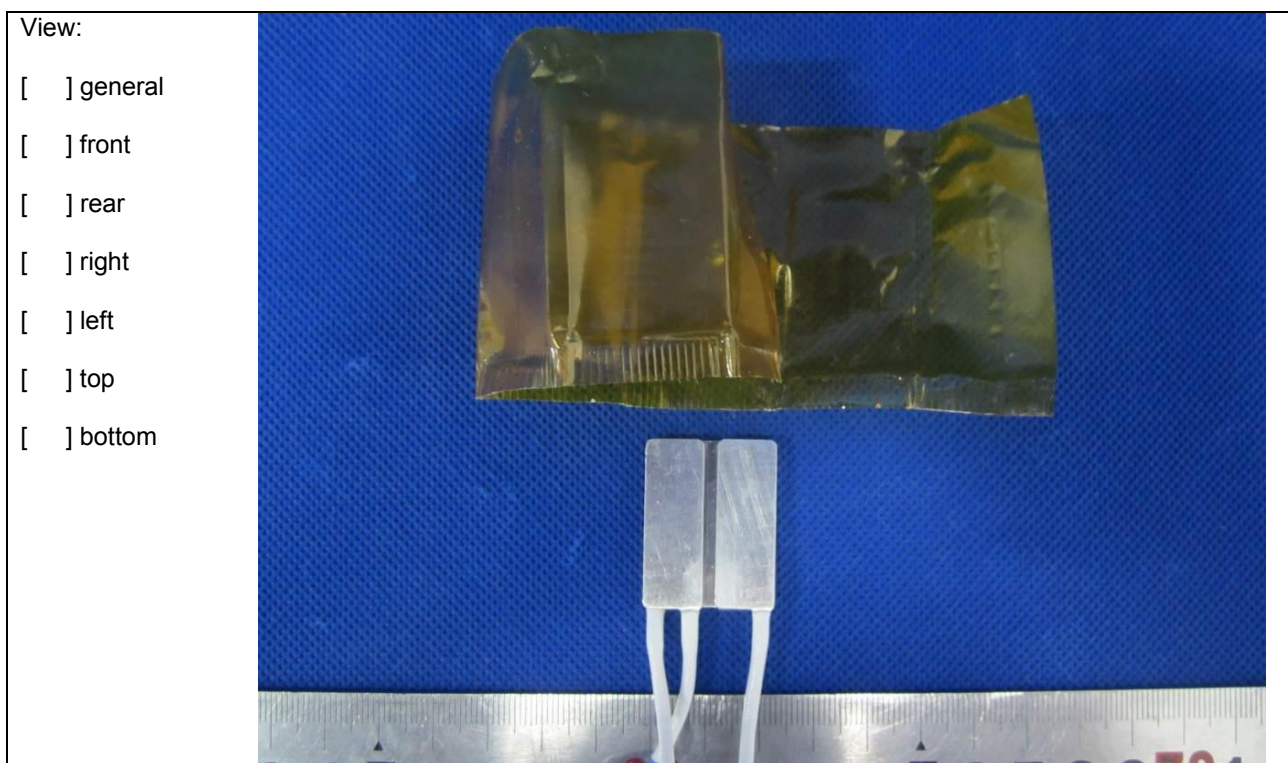
Annex I: IEC60335_2_23H			
Clause	Requirement + Test	Result - Remark	Verdict
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers a presumption of conformity with the safety objectives of that Directive and associated EFTA regulations		P
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the safety objectives		P
<b>ZZB</b>	<b>ANNEX ZZB (INFORMATIVE) RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND THE ESSENTIAL REQUIREMENTS OF DIRECTIVE 2006/42/EC AIMED TO BE COVERED</b>		—
	This standard provides one means of conforming to essential requirements of EU Directive 2006/42/EC		N/A
	When cited in the Official Journal under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers a presumption of conformity with the essential requirements of that Directive and associated EFTA regulations		N/A
	Compliance with this Part 1 when used together with the relevant Part 2 provides one means of conformity with the essential health and safety requirements		N/A

Table Z101 (1) - Maximum temperature rises under normal operating conditions (EN 60335-2-23/A11) (MWFS518)			P
	Test voltage (V).....:	1,15 <sup>1/2</sup> x240=257,4 V	—
	Ambient (°C).....:	T1=23,0 °C, T2=23,6 °C	—
Surface	Surfaces of appliances likely to be touched		
	measured ΔT (K)	max. ΔT (K)	
Plastic and plastic coating > 0,3 mm	21,7	65	

Table Z101 (2) - Maximum temperature rises under normal operating conditions (EN 60335-2-23/A11) (MWFS518-1)			P
	Test voltage (V).....:	1,15 <sup>1/2</sup> x240=257,4 V	—
	Ambient (°C).....:	T1=23,2 °C, T2=22,7 °C	—
Surface	Surfaces of appliances likely to be touched		
	measured ΔT (K)	max. ΔT (K)	
Plastic and plastic coating > 0,3 mm	14,3	65	

< End of Annex I >

Detail of: Alternative PTC heating element (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)



Detail of: Alternative PTC heating element (for MWFS518, MWFS518-1, MWFS518-2, MWFS518-3)

